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ART. I.—EARLY SPIRIT OF THE WEST.—Part 2.\*

POLITICAL PARTIES AND FACTIONS IN KENTUCKY AND THE WESTERN COUNTRY  
FROM 1788 TO 1806.

[A. D. 1795.] "The Mississippi Company," composed partly of the same men, with the aid and under the patronage of Gen. Dayton and Sir Robert Liston, the British minister at Philadelphia, soon afterward attempted a similar fraud upon the legislature of Georgia, with a view to the fraudulent acquisition of the western territory of that State near the lower Mississippi. The scheme was first conceived and planned from a suggestion of Gen. Wilkinson, and contemplated that stupendous fraud upon the Federal government and upon the State of Georgia since known as the "Yazoo Speculation." The attempt to corrupt the legislature was at first successful; but the legislature was thoroughly purged, when the whole scheme failed, involving all concerned in ruin and disgrace.

Failing in the attempt to acquire a valid claim to the Yazoo lands through the Georgia legislature, the Mississippi Company, under a new organization, and under the auspices of prominent disunionists, set on foot a scheme for acquiring a claim from the Spanish crown, adverse to the sovereignty of both Georgia and the Federal government. Under the pretext that the company represented a large number of American citizens, application was made to his Catholic Majesty for an extensive grant of lands on the east side of the Mississippi, between the sources of the Yazoo river and the southern limit of the United States. This scheme, also, was defeated by the negotiations of the Federal government, and the whole of western Georgia, comprising the Yazoo and Natchez countries, was ceded by his Catholic Majesty to the United States in full sovereignty, by the treaty of Madrid, signed on the 20th of October, 1795.

[A. D. 1798.] The members of the Mississippi Company and their disunion allies, having failed in all their schemes of personal aggrandizement and corruption in the United States, again had recourse to the bounty of the king of Spain. Under the guidance of General Dayton, General Williams of New York, and James Gunn, application was made to his Catholic Majesty for a large grant of lands within the limits of Louisiana; but, before the agent could receive an audience from the king, the whole province of Louisiana, by the treaty of Ilde-

\* Continued from April number.

onso, had been ceded to the French Republic. Nothing daunted by these successive reverses, the agents attempted to negotiate with the French government in favor of a similar concession. A scheme was laid with French agents and correspondents in the United States, through others in Paris; but after a fruitless negotiation of nearly two years, the whole province of Louisiana, by a treaty of Paris, was ceded to the United States.\*

Pending the negotiations which resulted in the treaty of Paris, the French party in the United States, including disunionists of every stamp, were active in schemes of intrigue and opposition to the measures and general policy of the Federal government, until the final transfer and occupancy of Louisiana. This opposition was secretly promoted by General Dayton, Colonel Burr, and other prominent land-speculating disunionists, who were on terms of intimacy with the celebrated Abbey Talleyrand, during his two years' sojourn in the United States. With his aid, and that of an intriguing Frenchman in Richmond, Virginia, by the name of Chavalier, an agent of the house of Beaumarchais in Paris, a correspondence was maintained with the National convention. Through the same medium, these disunionists had for years continued to embarrass the Federal relations with the French Republic.†

[A. D. 1800—1803.] Meantime other companies of land speculators and disunionists had been engaged in similar schemes of personal aggrandizement, besides hundreds of land-jobbers, who were upon the field of disputed titles and boundaries in Kentucky, growing out of the early legislation of the State of Virginia. While all Kentucky was suffering under the combined influence of speculators and land-jobbing lawyers, the early pioneers, not excepting Daniel Boone and his wife, were driven from their homes and firesides, which they had wrested from the wily savage, and compelled to seek an asylum within the dominions of Spain. At the same time, Judge Sebastian, for himself and his fellow disunionists of the Spanish party, was contemplating the acquisition of a grant from his Catholic Majesty, for three millions of acres in upper Louisiana, upon the waters of the Missouri river, with the avowed object of establishing a colony of "adventurers" from Kentucky, who were "*discontented with the government of the United States*, and desired to live under the mild and pacific government of Spain."

The authorized agent of this company to the court of Madrid, was Dr. John Watkins, who, with ample funds and credentials, set out on his important mission. But the vain man, only a few years from his studies in Edinburgh, was an unpracticed traveler in Spain; and, on the road to Madrid, he was entrapped by gentlemen robbers, who politely relieved him of funds and credentials, and delayed his appearance at court until after the treaty of Ildefonso.

This same Dr. Watkins four years afterward acted a conspicuous part in the first occupancy of Louisiana by the Federal authorities; became the admirer of Governor Claiborne and General Wilkinson, until they had taken effectual measures for the complete frustration of Burr's conspiracy. He then became the bitter reviler of both, and the brazen

\* See Western World, October 6th, 1806—also August 23d, 1806.

† Idem—August 2d, 1806.

mouthed defender and apologist of Burr and his confederates. In 1807 he harrangued the legislature two whole days with bitter invective and intemperate declamation, against the civil and military authorities of the U. States, for their agency in defeating the designs of the conspirators.

[A. D. 1804.] At the transfer of Louisiana, a large proportion of the land speculators, who literally swarmed in the West, were disappointed men who had impoverished themselves by years of unavailing efforts in visionary schemes of aggrandizement; large liabilities had been incurred, and bankruptcy or success was their only alternative. A new field of operations was presented in the conditions of the treaty of cession from Spain to France; and this was seized with avidity by the lynx-eyed speculators as a *dernier resort*.

The Spanish authorities, who had administered the government up to the period of transfer, were still resident in the country, and not unlike the majority of those exercising authority under a weak and corrupt government, were accessible to overtures and collusion, for the purposes of gain and personal aggrandizement.

The new field of operations comprised the whole scope of the French and Spanish grants and concessions for more than half a century, under all possible circumstances and phases. Claims and evidences of title were to be raked up from old records, musty documents, antiquated titles, concessions, settlement-rights, transfers, entails, and every species of oral and written evidence of title, real and factitious.

[A. D. 1806.] Claims of this character were eagerly sought by the land speculator, and as freely produced by the needy creole, and the avaricious fabricator. An active commerce sprung up between the artful land-jobbers and the docile, unlettered settler; titles, complete and incomplete, were multiplied in endless variety; and, before the close of the year 1806, the several Recorders' offices established by Congress for upper and lower Louisiana, were filled with the accumulated titles and claims to land filed for record. Subsequently the number was greatly increased by the various acts of Congress, providing for such as were excluded by previous acts.

During this period the rage for speculating in lands pervaded the whole western country, as well as the principal cities of the Atlantic seaboard. "To such an extent," says the Frankfort Palladium, "had the hateful spirit of inordinate speculation in lands proceeded, that it had corrupted the fountains of legislation and the courts of justice, as well as the body politic. The rapacious spirit of accumulating large bodies of land, pervaded the whole country and nation, engendering a mass of corruption in every State of the Union; and which menaced the existence of the Union itself!"\*

The halls of Congress were thronged by artful agents and intriguing speculators, who exerted all their influence to control the legislation as well as the general policy of the Federal government, on the subject of the public domain, and to give such shape and force to bills as might be most advantageous. The uniform policy of the Federal government was in favor of an equitable distribution of the public lands in *small divisions* suitable for individual families, and at a certain fixed price per acre. The views and interests of the speculator was just the

\* See Frankfort Palladium (Kentucky), January 25th, 1806.

reverse. He sought to monopolize the public domain for his own individual aggrandizement; or, to lay the foundation of immense landed estates and barronial possessions suited to a landed aristocracy. A policy exactly suited to his views prevailed within the Spanish dominion, which was maintained in west Florida, south of the line of demarcation and north of the island of New Orleans, as well as in the territory west of the Natchitoches. The national difficulties and the arrogant pretensions of the Spanish government relative to boundaries, were such as to provoke resistance on the part of the Federal government; and the Spanish authorities, contemplating a retrocession of the territory lying on the west side of the Mississippi, were active in attempts to foment discontent in the creole population, and to induce collisions with the Federal authorities. At the same time Spanish troops in west Florida and Texas, with the knowledge and instigation of Colonel Burr and General Dayton, were put in motion to sustain the pretensions of Spain. Prior to this movement *Colonel Burr had been closeted for hours together with the Spanish minister, Yrujo, near the Federal government.*

At such a time as this, when the western people were organizing into volunteer regiments in Ohio, Kentucky and Tennessee, and tendering their services to the Federal government for the vindication of their national rights, and when the Commander-in-chief had been directed to occupy the threatened frontier; when disunionists had been sowing the seeds of discontent in upper, and the Spanish in lower Louisiana, Colonel Burr, late Vice-President of the United States, but the unsuccessful candidate for President, chagrined and embittered in his feelings toward those in power, embarrassed in his financial schemes, and reckless of consequences as to the future, was traversing the whole western country, "making his galloping journeys," and "his meteor-like visits," to every point of the new States and Territories. His former elevated station, his exalted intellect, and his fascinating address, gave him a ready access to the confidence of the wealthy and influential, and a commanding influence in all popular assemblies.

The public were impressed with a belief that his visits were intimately connected with some important secret enterprise, under the cognizance, if not under the immediate orders, of the Federal government. The enterprise in which he was engaged, was represented as one which opened the direct road to wealth and distinction, to those who are ambitious of honorable promotion. The ardent, the credulous, the ambitious and the desperate, were attracted by the mysterious nature of the expedition; and satisfied by vague hints, innuendoes and significant phrases, that it was not only feasible, but highly advantageous to all concerned, they relied for success upon the skill and ability of their enterprising leader.

Thus men were secretly enlisted, agents appointed, emissaries employed, money procured, arms, ammunition, provisions and military stores, were provided at various points on the Ohio and Cumberland rivers, preparatory to the execution of the grand unknown design. In every county of Kentucky Burr had "his enlisting officers," and an expedition against the Spanish provinces was intimated as the object of the enterprise; yet it was frequently intimated that "*there was some-*



thing more behind—"that the present government of the United States could not stand, that much money might be made by the *first adventurers*."\*

To a few of his intimate associates and confidential friends, disunionists and inimical to the administration of Mr. Jefferson, he disclosed more fully his ulterior plans.

*Abortive attempt to arraign Colonel Burr.*—The watchful eye of the Federal government had been directed toward Colonel Burr, and all his movements had been closely observed for months; yet so artfully had his designs been concealed by his friends and adherents, that it was not until the autumn of 1806, that public suspicion was awakened to his real resign; and the people of Kentucky were thrown into a state of great excitement, by the first attempt of the Federal authorities to arrest the unlawful enterprise. On the 5th of November, Joseph Hamilton Daviess, Esquire, District Attorney of the United States for Kentucky, moved for the arrest of Aaron Burr, upon a charge of setting on foot "a military expedition against the Spanish provinces."†

\* See Western World, June 30th, 1808, article "*Regulus Answered*." A number of elaborate articles had appeared in the public prints, over the signature of "*Regulus*," in vindication of Messrs. Allen and Clay—and from the pen of Mr. Clay himself, as was supposed.

† The following is a transcript of the proceedings instituted in the Federal Court at Frankfort, Kentucky, against Col. Aaron Burr, November 5th 1806—viz.: *Federal Court—Hon. Harry Innis, Judge presiding.*

United States, Plaintiff,	}	On motion of the United States
versus		District Attorney,
Aaron Burr, Defendant.		J. H. Daviess.

"**MOTION IN THE FEDERAL COURT OF THE KENTUCKY DISTRICT AGAINST AARON BURR, ESQUIRE, LATE VICE-PRESIDENT OF THE UNITED STATES, FOR CRIMES OF HIGH MISDEMEANORS.**

"On Wednesday, about noon, on the fifth instant, J. H. Daviess, Esquire, Attorney of the United States for the above district, rose, and, addressing the court, said that he had a motion to make of the utmost magnitude and extraordinary nature, and which regarded the welfare of the Union at large. That the unhappy state of his health alone had prevented him from making it on the first day of the term. That he should ground his motion on an affidavit which he would present to the court. He then made oath to the following affidavit:

"UNITED STATES OF AMERICA, KENTUCKY DISTRICT, *et c.*—J. H. Daviess, Attorney for the United States in and for said District, upon his corporeal oath, doth depose and say, that the deponent is informed, and doth verily believe, that a certain Aaron Burr, Esquire, late Vice-President of the United States, for several months past, has been, and is now, engaged in preparing and setting on foot, and in providing and preparing the means for, a military expedition and enterprise within this district, for the purpose of descending the Ohio and Mississippi therewith, and making war upon the subjects of the king of Spain, who are in a state of peace with the people of these United States—to wit., on the provinces of Mexico, on the westwardly side of Louisiana, which appertain and belong to the king of Spain, a European prince, with whom these United States are at peace.

"And said deponent further saith, that he is informed, and fully believes, that the above charge can be, and will be, fully substantiated by evidence, provided this honorable court will grant compulsory process to bring in witnesses to testify thereto.

"And the deponent further saith, that he is informed, and verily believes, that the agents and emissaries of the said Burr have purchased up, and are continuing to purchase, large stores of provisions, as if for an army; which the said Burr seems to conceal in great mystery from the people at large, his purposes and projects; while the minds of the good people of this district seem agitated with the current

After an ineffectual attempt to procure a fair and impartial trial, the Federal Attorney was at last compelled to abandon the prosecution; yet it was not until he had become fully convinced of the overbearing influence of the court in favor of the prisoner, and an evident disposition not only to overrule every motion made by the prosecution, but to entertain every plea and motion for the defense.

The defense was conducted by Colonel Burr himself, assisted by his counsel, John Allen and Henry Clay, Esquires, both exercising unlimited influence over the Federal Judge, who, by an unprecedented decision, and an extraordinary charge to the grand jury, seemed determined to embarrass every effort of the District Attorney.

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rumor that a military expedition against some neighboring power is preparing by said Burr.

"Wherefore said Attorney, on behalf of said United States, prays, that due process issue to compel the personal appearance of the said Aaron Burr in this court, and also of such witnesses as may be necessary on behalf of the said United States, and that this honorable court will duly recognize the said Aaron Burr, to answer such charges as may be preferred against him in the premises; and in the mean time, that he desist and refrain from all further preparation and proceeding in the said armament within the said United States, or the territories or dependencies thereof.

J. H. DAVIES, A. U. S. :

"Having read this affidavit, the Attorney proceeded in the following words :

"The present subject has much engaged my mind. The case made out is only as to the expedition against Mexico; but I have information on which I can rely, that all the western territories are the next object of the scheme; and, finally, all the region of the Ohio is calculated as falling into the vortex of the new proposed revolution. What the practicability of this scheme is I will not say; but, certainly, any progress in it might cost our country much blood and treasure to undo; and, at the least, great public agitation must be expected.

"I am determined to use every effort in my power, as an officer and as a man, to prevent and defeat it.

"Having made the affidavit myself, I shall make no comments on its sufficiency.

"In case of felony, the affidavit must be positive as to a felony actually committed, but in a misdemeanor of this nature, where the sole object of the law is prevention, such an oath cannot be required; the thing must rest on belief as to the main point of guilt.

"I could easily prove positively the purchase of supplies of various kinds, but this is no offense. Mr. Burr may purchase supplies; he may import arms; he may engage men, which I am told is actually begun; yet all these things, being proved, make no offense—neither can proof of the declarations of his known confidants, of which abundance might be had, attach guilt to him: it is the *design*, the *intent*, with which he makes these preparations that constitute his misdemeanor.

"There must be a great exertion of supposition to imagine a case in which positive proof of the illegal *design* can be had; it must rest in information and belief.

"The court, ought, therefore, to issue a warrant or *capias* for the accused, and examine witnesses, when the court will be able to decide whether Mr. Burr should be bound to good behavior on the premises, or recognized to appear here and answer to an indictment."

In answer to this motion, Judge Innis declared the course of the Federal Attorney without precedent or sufficient evidence, and required the mature reflection of the court; that to award the process required, would be oppressive and *unjust to the accused*, and would be an *act of tyranny*, to which the court could not be accessory.

The District Attorney then demanded a grand jury, which at length was conceded; and a grand jury was impaneled and sworn. Among the witnesses were Benjamin Sebastian, John Brown and General John Adair, besides

At length, in view of the excited state of public feeling induced by designing men, and a knowledge of the strong measures threatened by Burr's friends and advocates, the District Attorney was induced to make a formal motion for the *discharge of the grand jury*, upon the alleged plea of the absence of a material witness for the prosecution.\*

\* See Mississippi Messenger, Dec. 6th, 1806.

many others known as formerly Spanish associates.—See *Western World*, Nov. 8th and 15th, 1806—also the *Mississippi Messenger*, Dec. 9th, 1806.

As this trial was one of unusual interest, it may not be superfluous to give the reader a brief sketch of the proceedings in the case, as follows, viz.:

Nov. 8th. The grand jury was called and Judge Innis delivered his charge, which was altogether favorable to the accused. Mr. Daviess then arose and informed the jury that they might call on him if they thought proper, to assist them in the examination of witnesses, when his further remarks were interrupted by Henry Clay, Esquire, one of Mr. Burr's counsel, who, addressing the court, observed, "that the privilege contended for by the Federal Attorney was a *novel one*, and he hoped the court *would not grant it*."

Mr. Daviess replied at length, and closed his remarks with the following words, viz.: "Mr. Clay declares his confidence in the innocence of the accused. After this I was in hopes he would have renounced all *attempts to stifle inquiry*. If there is no scheme, my examinations cannot make the witnesses *swear there is one*. *If there is an enterprise*, my inquiries may develop it." The court overruled the motion and refused to permit the Federal Attorney to aid in the examinations of the grand jury, and the case was submitted to their unaided deliberations.

The grand jury as their finding, returned "*an address to the court*," extraordinary and unprecedented in its character, *asserting their belief* in the entire *innocence* of the accused, as to any intention or design to violate the laws of the country. "John Allen, Esquire, one of the counsels of Colonel Burr, then arose and desired permission to take a copy of the address of the grand jury for publication, in order to relieve public suspicions concerning his intimate friends who were implicated in the public censure."—See *Western World*, Dec. 13th, 1806.

Mr. Daviess, fully assenting to the copy for publication, closed his remarks with the following significant words, viz.: "I know much *parade of innocence* will be affected: *I repose upon events*. The public mind may be carried off: but in a few months it will perceive this project as it really is. My conviction is *unshaken*. The grand jury seem to have aimed a blow at the root of *rumor and suspicion*. Let the Court fix the disgrace on me or on them.

"I will venture to assert that the address to the grand jury is altogether unprecedented, and, consequently, *improper*. Why has it been necessary to depart from the common course of proceeding? Why in *this case* did the jury travel out of the established course, which from time immemorial has been pursued, as well by the grand jurors of Kentucky as of every other country, from the first dawn of jurisprudence? Did the jury *think it necessary*, in order to remove *suspicion from the character of Colonel Burr*, that they should transcend the usual limits of their duty, by *eulogizing* the man, whom, in the capacity of jurors, they could *only condemn or acquit*, according to the evidence before them? Did the jury attend to the proceedings before the court? Did they not perceive that every nerve was exerted by Colonel Burr and his counsel to suppress inquiry? *Does this look like innocence?*

"I trust the great body of the people of Kentucky, will concur with me in the opinion, that the Jury in their singular "*address*" have given strength to the idea already entertained, that *Colonel Burr is now engaged* in a project in *frimica* to the perpetuity of the Union.

"Is Colonel Burr a man of so much importance to *this community*, and his innocence, or his *exemption from suspicion*, so essentially requisite, that the grand jury must draw up an *address*, not only declaring him *not guilty* (which was the proper stopping place), but must they also go further and declare him '*clear of suspicion*?' \* \* \* \*

"Every attempt has been made by Colonel Burr and his counsel in court to

This premature attempt to arraign Colonel Burr, without sufficient evidence for his conviction, served only to produce a popular prejudice in his favor and to give a partial triumph to his friends over law and justice; while a disbelief or doubt of his guilt gave him an opportunity of expediting his equipments and prosecuting vigorously his plans for descending the Mississippi.

After his discharge at Frankfort, Colonel Burr proceeded to Nashville, where his late honorable discharge secured him many friends and a hearty welcome. Encouraged by his good fortune, he resumed his preparations, which were urged with renewed vigor for the consummation of the grand enterprise. Friends multiplied, and money was advanced at will for expediting his voyage down the Mississippi. Boats of light draft were in progress of construction at various points upon the Ohio and Cumberland rivers; arms, ammunition and supplies of all kinds were provided for the expedition, which was designed to enter the Mississippi about the 20th day of December.

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prevent an *open inquiry*; and *nothing was left undone*, which might *embarrass the public Attorney*, and prevent his *arriving at the truth*.

"I cannot forbear extending my remarks, by observing that the honorable Judge appeared *predetermined* to have Colonel Burr acquitted, *and that with effort*, if possible."—*See Western World, Dec 18th, 1806.*

The friends and adherents of Colonel Burr, elated at their success in eluding the power of the law, and to sustain the Court and grand jury before the public, proceeded to celebrate Burr's release by a ball to the successful intriguer.

The day after the finding of the grand jury, tickets were distributed for a ball to be given in *honor of Colonel Burr*, appointed for Monday night at Captain Taylor's Hotel: but the enthusiasm of the masses was *not* for Colonel Burr and his confederates. The ball was but poorly attended either by gentlemen or ladies, and those in attendance were chiefly from the families of Harry Innis, John Brown, and others favorable to Burr's schemes: the whole display proving very *unsatisfactory* to Colonel Burr and his satellites.

Indignant at the outrage upon the community, a number of patriotic citizens, of the first standing in the country, united in giving a splendid ball on Thursday night following at Bushe's Hotel, in honor of *the Union*, and in approbation of the *vigilance and firmness of Joseph H. Davies*, District Attorney of the United States. Among those in attendance were seventy gentlemen and thirty ladies. Among the former were the Governor and Secretary of State, the Speaker of the House of Representatives, and many leading members of both houses of the legislature.—*See Western World, Dec. 13th, 1806.*

Among the distinguished citizens, who served as *managers* of this patriotic ball, were *Colonel James F. Moore*, Senator; *Major-General Samuel Hopkins*, member of the House of Representatives; *John Pope*, Senator in Congress, *John Rowan*, Secretary of State; *General Green Clay*, Speaker pro-tem of Senate; *Colonel Jilson Payne*, State Senator; *Colonel Henry Crist*, *George Bibb, Esquire*, and *Samuel M'Kee*, members of the legislature; *Captain Richard Taylor* and *Wm. Trigg, Esq.*

The festivities of the evening and the patriotic convivialities of the occasion were enlivened by the cordial sympathies of the heroes of 1776, with the solitary interruption of a transient scowl of indignation at the unwelcome appearance, for a moment, of a *spy* from the Burr conspirators.—*Western World, Dec. 18th, 1806.*

Neither Mr. Clay or Mr. Allen were present at either of the balls above named. The course of these two attorneys in the case of Colonel Burr, excited a storm of public indignation against them, as well as against other prominent aiders and abettors of Burr's cause. The popular indignation prevailed most against John Allen, Benjamin Sebastian, John Brown, George Nicholas, Harry Innis and others of the former Spanish party; and notwithstanding the strenuous exertions of Mr. Clay in a series of elaborate articles, published over the



Meantime apprehension and alarm were awakened throughout the whole West and South-west. The release of Burr was viewed by the great body of the people as portentous of danger to the stability of the Union, which seemed verging to dissolution. Nor was this apprehension diminished, when the President of the United States, on the 27th of November, issued his proclamation, announcing the existence of a powerful combination of lawless individuals, who were engaged in the unlawful enterprise of a military expedition against the dominions of Spain, and commanding all civil and military authorities of every grade to be active and vigilant in suppressing the same.

On the 2d of December, Edward Tiffin, Governor of Ohio, submitted to the legislature a confidential communication, announcing the active preparations then progressing within that State, under the immediate direction of Colonel Burr's agents, who were then equipping twelve or fifteen Kentucky flat-boats near Marietta; and that he was informed of two other floatillas preparing on the waters of the Ohio, for the purpose of joining the general expedition. He also communicated his views relative to the object and design of the conspirators; having been credibly informed that the expedition was *at first* to consist of thirteen hundred men, with such reinforcements as might be ready to join them for the capture of New Orleans and its dependencies; together with the erection of a new government, independent of the United States, and under the protection of a foreign power; that the western people were to be *seduced* from the Union, or *forced to cede from it*.

The governor was clothed with the authority to call out the militia; and fourteen boats containing military stores and supplies, were seized at the mouth of the Muskingum.

About the same time a number of boats, containing provisions, ammunition and arms, supposed to belong to Aaron Burr, having passed the Falls, a detachment of militia, under General Winlock, was stationed at Louisville with orders to examine all boats passing. Other detachments were likewise posted at the mouths of the Cumberland and Trade-Water rivers.

Among the boats which had descended the Ohio, were two, containing artillery, musquets and bayonets, of French manufacture, and on board were several men who spoke the French language.\*

The spirit of disunion and revolt had been widely diffused among the French and Spanish inhabitants of upper Louisiana, and among the French of the Illinois country, from St. Louis to St. Genevieve

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\* Western World, Dec. 6th, 1806.

signature of "*Regu'u*," to defend them and shield them against *public odium*, they were compelled to submit to a thorough inquiry by the legislature, which resulted in the disclosure of the most astonishing corruption in office, and moral turpitude, by exposing acts of a treasonable nature which had marked the career of prominent politicians for more than twenty years previous. These investigations relative to the treasonable conduct of Innis, Brown, Sebastian, Nicholas and Allen, were warmly opposed in the legislature, by Henry Clay, who used every effort to smother investigation, as he had done in the defense of Burr. Yet the inquiry was pressed forward, and the seal of national disgrace was set upon the guilty; and the "*Spanish Associates*" were fully exposed.—See *Western World*, July 28th, 1808.

and Kaskaskia. A respectable gentleman at St. Louis, in a letter dated November 9th, 1806, states that "the greater part of the French and Spaniards are *disaffected* toward the government of the United States, and are rejoicing in the prospect of becoming subjects of their old masters. They seem to view the measure with the utmost pleasure, and its consummation beyond doubt."\*

General Samuel Hopkins, of Henderson county, who had visited this region, in a letter dated December 18th, 1806, says "that as soon as Colonel Burr's return from the South was announced at Kaskaskia, consternation seemed to pervade all ranks of Americans in the territory. It was certain Colonel Burr had written treasonable letters to St. Louis, and had greatly elated the *French and Spaniards* with the hope of soon being *dismembered from the Union*;" also "in St. Genevieve and on the road from thence to St. Louis, scarcely any other subject was mentioned; and after the despatches from Colonel De Paister, the French and Spanish inhabitants looking upon the event as if it had already taken place—two militia captains having hailed the *fifteenth day of November* as the period of their emancipation, declared that they would rally around the *Spanish flag* the moment it should be hoisted."

Yet the adherents of Burr at this place, as in all other places, affected to treat the *alarm and apprehension* entertained by the friends of the Union as preposterous and unfounded.

In the Indiana territory the Federal jurisdiction extended from the Great Miami westward to Kaskaskia and the upper Mississippi: yet Burr had succeeded in gaining over to his schemes and interests, the Federal Judge, the Governor, and a strong influence in the Territorial legislature. As late as December, 1807, the influence of Burr's adherents, with a little intrigue, was strong enough to secure the election of Major Davis Floyd, to the office of clerk in the lower house, although he had been indicted with Aaron Burr at Richmond, for a *high misdemeanor* against the government; and had subsequently been arraigned at Jeffersonville before the Federal Judge, Thomas T. Davis, who, after a mock trial, had sentenced him to the mere nominal fine of *ten dollars and three hours* imprisonment.

This same Judge Davis had been one of Burr's intimate friends, and an early and prominent adviser of his unlawful enterprise.†

The subsequent career of Colonel Burr on the lower Mississippi, his capitulation, his mock trial at Washington, his absconding from the civil authorities, and his final capture by the military arm of the government, all within the limits of the Mississippi territory, have all been recorded in another place.‡

The schemes of Colonel Burr, his plans of ambition and personal aggrandizement, and the revolutionary enterprise contemplated by him, or for which he was suspected by the government and the friends of the Union, cannot be more explicitly and more concisely expressed, than in the following graphic sketch from the "*Western World*," of January 1st, 1807, entitled "*Burr's Conspiracy*," viz.:

\* *Western World*, Nov. 28th, 1806.

† See a letter from Jeffersonville, dated Aug. 24th, 1807, in the *Western World* of Sept. 24th, 1807.

‡ See *History of the Valley of the Mississippi*, vol. 2.

"The proclamation of the executive of the United States renders every sort of reserve on the part of the public papers friendly to the government no longer necessary: the matter is now established upon the clearest and most authentic foundation, the official authority and act of the chief magistrate.

"The public now explicitly know that a conspiracy has actually existed. We may now, with propriety, enter upon a more detailed investigation, and offer, without reserve, both the facts with which we are acquainted, and the obvious courses and consequences of the designs which have been for nearly two years hatching.

"The design of Mr. Burr, we are credibly informed, arose from an application made to him to favor the seizure and occupation of the *Yazoo territory*, under the color of law, but by *force and arms*. To this project, Mr. Burr *appeared* not at first to pay much attention—it was considered as not of sufficient moment, nor affording adequate objects to tempt ambition nor to reward such faculties as were best adapted for brilliant and hazardous enterprises; that the object could neither produce *in advance* the means for its own accomplishment, *nor reward* those who should engage in it, but by the slow and precarious means of agricultural labor; that it was likely to meet national opposition, while it increased the hazard; that men who would lead, and by whose talents great enterprises are always conducted and prove successful, would not enter upon *such a project alone*, while lands were to be had so easily in the States and new Territories, or in the new acquisitions of Louisiana, without such hazards; but that under all considerations there were obstacles on the threshold which were insuperable—these were, it is presumed, *men, arms and money*.

"It was represented that from the eastern States a great number of men could be procured; that in the *capital cities* there were many persons ready to *advance money*, and that other resources could be provided by means well understood: what *these means* are we may possibly be able to point out, and we know that the executive is fully apprised of *certain means* which were already put in operation and with apparent success.

"We have heard very lately of 6,000 stand of arms, shipped from *Baltimore*, for that direction—but we have also heard of a stratagem by which it was intended, under specious and apparently patriotic pretenses, to arm the insurgents with the *weapons of the general government*, and from its arsenals. The reader will observe that in this article we have blended *facts of which* we possess the *evidence*, with other *inductions* from the facts, which concur with each other, and render the whole coherent and complete.

"New suggestions that *men and money could be procured* were the dawning rays of the conspiracy—and upon the assurance of these being forthcoming *on demand*, this great fabric which we are now to expose to the world's indignation was founded.

"The scheme of empire was more comprehensive, than any man not well informed can *conceive*—but it is demonstrable, that is, the editor of this paper can demonstrate beyond a shadow of doubt, and in spite of the most confirmed incredulity, that the *design conceived and intended by Mr. Burr*, extended to

1. "The establishment of a despotic government on the shores of the Gulf of Mexico.

2. "That Mr. Burr was to be the despot.

3. "That from among his friends in the United States were to be selected the materials of new nobles—no doubt conservative senates and legions of honor!

4. "That among his designs of empire were *fundamentally* predetermined a formidable military and naval establishment, and that it was to be reared from the materials of the United States, *combined with other foreign materials*.

5. "That, of course, the sea-coast, on an extensive line, was to be seized and occupied.

6. "That offers of honor and emolument were to be held forth to adventurers, and to every description of persons from all parts of the world.

"This vast and dazzling project was *communicated to very few*; but we know *to whom it was communicated*—we can prove it, if the great culprit should be brought to the bar of national justice. The readers of this paper know we have never hazarded a declaration of this nature, without *assurance doubly sure*: the executive of the Union is fully possessed of the facts.

"But as the extremes at which the rapacious and treasonable seizure of the Yazoo speculation is placed from the erection of a new empire may shock the judgments of men who are either not accustomed to reflect, or look to others to reflect for them, we shall endeavor to pursue the clue which unites these extremes, and therein reveal the intermediate members which unite and make them one.

"In our cities there are, and ever will be in large opulent cities, a number of men of desperate circumstances—men reduced by extravagance—by gaming—by the failure of complex speculation—by bankruptcy—by foreign contaminations—by hostility to government—by vicious and irregular habits—*fit instruments for any daring enterprise*, in which their despair may find a resource for hope or a termination.

"These men are always easily known—and never difficult to be attracted by a man of social and persuasive manners—where *good fare* and *fair promises* find a ready access and a firm hold—men with that kind of honor which is proverbial even among *thieves*, which unites and *chastens* and *sanctifies* as it were, the approach and the coöperation in treason.

"In the territories of the United States, the hateful spirit of inordinate *speculation in lands*—that rapacious spirit of accumulation of immense tracts of lands, such as first infected the Roman patricians, and inflamed the Roman people to seek, by an agrarian law, the security of liberty against the all-devouring influence of partial monopoly; such a spirit of speculating rapacity throughout the nation, has formed a *mass of corruption* in every State of the union, which menaces the safety of the nation, and pointed out to the great conspirator the resources from which he was to draw the fuel for that *flame* which *Granger* said would soon rise in the western country.

"In the new settled countries of the United States, there are hundreds of persons who hold lands *for which they have not paid*.



"There are others who hold lands for which heavy taxes are due.

"There are others whose titles to land are bad, and some precarious.

"There are others who are discontented because they are not elevated to power or place in the General or State governments, whose bosoms engender discontent and are prepared for revolt.

"To these men of every description the overtures of a specious and daring incendiary could never be mistaken or misapplied. Mr. Burr, who has been a *speculator* upon the most comprehensive and *always overdone* scale, was better qualified, perhaps, than any man in the country to *know* and obtain the *sympathy of such men*.

"He made a journey, last year, to Kentucky, in search of these materials.

"His friend, *Jonathan Dayton*, was also in the western country.

"The intrigues of the Spaniards, and the British, to dismember the western country, seventeen years ago, pointed out the ready means to ascertain the quality of similar disaffection which yet existed.

"In Tennessee, and in the Mississippi territory, the same means have been resorted to.

"But it will be a natural suggestion to the reflecting man—How can the occupation of the *Yazoo*, and the separation of the western country—and the riddance of State taxes, and the assurance of doubtful titles, be combined in one project?

"The question is *certainly* reasonable—but the *congruity* is not the less in conformity with all the experience of mankind.

"The personal object of Mr. Burr may be considered the primary one. It is not to be supposed that either his *sagacity* or his *cunning*, would suffer him to unravel his whole scheme to *many*: perhaps not to a dozen persons. *We know* that to one man of celebrity he has proposed *one species of project*—the erection of a new Government beyond the Ohio.

"*We also know*, that to another gentleman, much more distinguished and eminent in the eyes of the country and the world, he suggested *another project*—which extended even so far as the seizure of *Vera Cruz*. Neither of them would listen to him with patience.

"There is nothing incongruous in the two projects—nor in that of seizing the *Yazoo*, as connected with them.

"The only matter which Mr. Burr wanted was to collect the force, with the requisite stores, arms and funds—and when collected, it would be too late for those who had embarked to become counsellors; they had flown in the face of the country—they had alienated themselves from its sacred laws and protection, and, like every desperate and deluded banditti, *the will and caprice of their leader* must, from that moment, be their *law*.

"To the *Yazoo*, therefore, he held out the realization of their speculations—and, behold, they have not only deposited immense sums in the western country, but they have conveyed through British Canada *brass field pieces to be ready for a great occasion*.

"To the disaffected and disappointed *few* (for in Kentucky they are very few indeed) he held forth the temptation of a new and separate government; and the new and vast advantages to be derived to their trade by a disconnection from the Atlantic States.

"To others who had views and speculations in Louisiana, he held out the name of the Baron de Bastrop's grant.

"To others the idea of a new government comprehending east Mexico and Louisiana, under an emperor, which emperor he was to be!

"The grand temptation in the first instance, when the force was marshaled and the plot ripe, and to seduce all the deluded into an overtact, was seizure upon the treasures of Mexico: this was to be the prelude to all the subsequent political establishments—they were to plunder Mexico, and build up cities and navies with the rapine.

"Our readers may think this mere fancy—but that it is most solemnly the truth, such as we have it in the most sober and creditable form, we declare in the face of heaven—and the executive of the United States is already in possession of the evidence of the principal facts to which we allude, and upon which their development is founded.

"To the foregoing sketch we shall only subjoin a few remarks for the consideration of the people of the United States. In this conspiracy is to be found none but men of what has been called the third party, the adherents of Burr.

"With this man, Burr, is connected Dayton and other federalists.

"From these men the late Spanish ambassador (or incendiary), Yrujo, received the information of the secret proceedings of our government at the last session of Congress.

"With this Yrujo, Burr was secretly closeted for hours together, when last in this city.

"By the dispatches of this Yrujo (and they have been regularly sent at stated periods for several months) the Spanish troops on the frontier of Louisiana have been put in motion.

"This plot was communicated to the court of Spain, and although a successor was nominated to Yrujo, he has, after having agreed for his passage, been induced to stay to see the project consummated.

"We shall not offer a word upon the political connections of Burr, in any part of the union: the public know them—and every honor that is due to the connection will certainly never be refused to them.

"It is presumed, however, that the marquis Yrujo, is at least entitled to another Brush Hill dinner from Dallas and Co., by way of proving, beyond all doubt, their very sincere attachment to the chief magistrate of the Union."

The moral and intellectual character of Aaron Burr, individually, cannot be more justly and more lucidly expressed than in the following sketch by William Wallace, viz.:

AARON BURR.—If Blennerhasset had been the only person ruined by Burr, in the prosecution of his enterprise, charity would suggest a burial of our remembrance of the exile's desolation. But the victims of Burr are to be numbered by hundreds. The base and the peaks of society, alike show the scathing marks of his fiery visitation.

He cherished no friendship; he returned, unhonored, the drafts of gratitude; he kindled, by the fireside of hospitality, the flame of lust, and felt little pleasure in bidding adieu to the *Lares* of his host, until the dearest that flourished in their shadows were sacrificed.\* The

\* He seduced the wife and daughter of the man who gave him shelter after the duel with Hamilton.

man's whole being centered on the pivot of selfishness. But for the affection he manifested toward his daughter, his sole moral merits seem to have been courage and coolness; and yet, clustering as were the laurels which they wedded to his brow, his baser passions so predominated, that he held it more glorious to seduce a woman\* than to glitter in the field of letters, to scale the steeps of philosophy, or to wave a banner victoriously in battle.

He courted the man to corrupt his wife—the statesman to profit by his influence—the millionaire to obtain his money—and the world to gratify his desires. He was the more dangerous from the possession of an intellect, massive, piercing, brilliant, united to a frame at once handsome and vigorous. His mind was but the keen and resistless weapon with which his passions hewed a way to conquest. That weapon was Protean. But few could escape its ever-changing attack. If the victim came fully under the gaze of an eye—whose sharp light resembled lightning imprisoned and forever playing in a cloud as black as night—he was lost. Burr's conversation was irresistibly fascinating—his hand swept over every chord of the human harp. He strewed the rosy path of the happy with flowers of a still brighter hue; he arched the troubled sky of the desponding with the rainbow of hope; he conjured up before the wrapt visions of the avaricious, mountains of gold; and, to the aspiring, he pointed out the shadowy vistas of glory.

Thus he stood, gifted, unprincipled, ruthless and terrible. The want of fortune alone prevented his presenting in one lurid, dreadful and overwhelming mass, that evil which he accomplished but too successfully in many details. Chance confined to valleys, comparatively humble, a tempest which only waited for a release to devastate continents.

It may be asked—"Is not his valor on the fields of his country to be remembered?" The answer must be—"Yes." That was a redeeming trait. No matter from what motive his military talents were exercised, our land reaped some benefit. But there are many persons who will doubt the real patriotism of one who was so ready to forswear his allegiance who trampled on so much that was sacred, and who held even his exploits against tyranny as less glorious than the moral destruction of a human being.

Age is expected to subdue; but with Burr the winter of time brought no snows to cool the lava of passion. At four score and six, the crater wore a glow as ardent as at twenty. His faculties mocked at a century. Age should bring the soothing calm of religion, to enable the barque, which has been tossed by the storms of life, to prepare for a worthy entrance into a sea of another world. Burr died as he had lived, practically an atheist. Age should bring respect; Burr died as he had lived, without the respect of the good. His hoary hairs went down to the grave floating on the breeze of infamy.

In cunning an Iago; in lust a Tarquin; in patience a Cataline; in pleasure a Sybarite; in gratitude a Malay, and in ambition a Napoleon—he affords the world a powerful example of powerful intellect, des-

\* His own assertion.

† He wished to claim his rights as a British subject, when in London. Lord Liverpool rejected the offer with contempt.

titude of virtue. His portrait would fitly appear in a circle of Dante's Inferno.

Let no one accuse me of stepping with unsanctified feet through the solemn vaults of the sepulcher. AARON BURR belongs to History. *Such was the lot he chose.*

## ART. II.—STATISTICAL BUREAUS IN THE STATES, Etc.

### INTRODUCTORY REPORT OF THE BUREAU OF STATISTICS OF LOUISIANA TO THE LEGISLATURE, 1850.

[A VERY small edition of this report only having been published, and that with many typographical errors, the author trusts a publication in the Review will not be without interest to its readers.]

THIS office having been established by the act of the 15th March, 1848, the undersigned, at the request of the Secretary of State, consented to undertake its duties, and to prepare a report, to be presented at the next ensuing session of the legislature.

The terms of the act require a report that shall embrace "information relative to the population, agricultural and other products, resources and commerce of the State, the mechanic arts, public education, public health and manufactures, and such other information as may be deemed important," etc.

It was evidently the intention of the legislature to obtain, if practicable, by means of this office, a complete statistical record, from year to year, showing the progress of our population and industry, in all their various manifestations. Such a record, if preserved for a long series of years, would, in the contrasts admitted of epoch with epoch, and our own with other States, prove an invaluable adjunct in legislation, and furnish a mass of information, in an available form, for the use of every class of citizens.

The field being wide and the subjects of research innumerable, the undersigned prepared, immediately after his appointment, a circular letter, setting out in full the objects of the bureau, and soliciting in its aid observations and facts from all sources. A large number of these circulars were forwarded to State and parish officers, members of the legislature, and leading citizens throughout the State.\*

#### \* CIRCULAR OF THE BUREAU OF STATISTICS TO THE PEOPLE OF LOUISIANA.

The superintendent of the bureau, by publishing again this circular, trusts he will be aided by his fellow citizens, in responses that will enable him to complete a report upon all the parishes of this State. He appeals to them in confidence. Address him at New Orleans.

- I. Time of *settlement* of your parish or town; dates of oldest land grants; number and condition of first settlers; whence emigrating; other facts relating to settlement and history.
- II. *Indian names* in your vicinity; what tribes originally; what relics or monuments of them; if Indians still, in what condition?
- III. *Biography*, anecdotes, &c., of individuals distinguished in your vicinity in the past for ingenuity, enterprise, literature, talents, civil or military, &c.
- IV. *Topographical description* of your parish, mountains, rivers, ponds, animals, quadrupeds, birds, fishes, reptiles, insects, &c., vegetable growths, rocks, minerals, sand clays, chalk, flint, marble, pit coal, pigments, medicinal and poisonous substances, elevation above the sea, nature of surface, forests, or undergrowth, what wells and quality of well water, nature of coasts, does the water make inroads, mineral springs, caves, &c.



It is believed, that the queries propounded in the circular, embrace every subject of interest relating to the soil and inhabitants of the State, which should be embodied in presenting a complete statistical report. It is impossible to say of any they are unimportant, and, although the prospect of obtaining information upon all, or even a majority of the points, is remote, omissions could only be made with the risk of falling short of what is actually attainable. Individuals informed upon any particular point in the circular, it was hoped, would reply to that in exclusion of all others, whilst others, having the time and ability, would make a more general response.

To some extent, the office has been disappointed in its reasonable expectations. Independently of the general indisposition to undertake labors, and more especially those involved in *statistics*, voluntarily, and without compensation, as the experience of state and federal officers proves, the novelty of the present call was likely to be unfavorable. It could not be known clearly and certainly, the objects of the Bureau and its minute interrogations, and, without this knowledge, coöperation, to any extent, was hardly to be anticipated. We have but lately begun to press statistical inquiries in any part of our country, and it is still too common to sneer at their results, as of little practical value, and always capable of proving whatever is required for the occasion. This objection would apply with equal force to the sciences of law, medicine, theology and many others, which is sufficient in its refutation. Without facts to proceed upon, all reasoning must be unsatisfactory and legislation result rather in injury than good. The indus-

- V. *Agricultural description* of parish; former and present state of cultivation; changes taking place; introduction of cotton, sugar, rice, indigo, tobacco, grains, fruits, vines, &c.; present products; lands occupied and unoccupied, and character of soils; value of lands; state of improvements; value of agricultural products; horses, cattle, mules, hogs, and whence supplied; profits of agriculture, prices of products; new estates opening; improvements suggested in cultivation and new growths; improvements in communication, roads, bridges, canals, &c.; kind and quantity of timber, fuel, &c.; state of the roads, summer and winter; kind of inclosures, and of what timber; manures; natural and artificial pastures; agricultural implements used; fruit trees, vines and orchards; modes of transportation; extent of internal navigation; levees, &c.; modes of cultivating and manufacturing sugar in use.
- VI. *Instances of longevity and fecundity*; observations on diseases in your section; localities, healthful or otherwise; statistics of diseases; deaths; summer sores, &c.
- VII. *Population* of your parish: increase and progress, distinguishing white and black; Spanish, French, American, or German origin; foreigners, classes of population; number in towns; growth of towns and villages, &c.; condition, employment, ages; comparative value of free and slave labor; comparative tables of increase; marriages, births, &c.; meteorological tables of temperature, weather, rains, &c.
- VIII. *Education and Religion*—Advantages of schools, colleges, libraries enjoyed; proportion educated at home and abroad; expense of education; school returns, churches or chapels in parish, when and by whom erected; how supplied with clergy; how supported and attended; oldest interments; church vaults, &c.
- IX. *Products in Manufactures and the Arts*—Kinds of manufactures in parish; persons employed; kind of power; capital; wages; per centum profit; raw material; sugar and cotton; machinery and improvements; kind and value; manufacturing sites, &c.
- X. *Commercial Statistics*—Value of the imports and exports of Louisiana, with each of the other States of the Union, as far as any approximation may be made, or data given; growth and condition of towns; increase in towns, &c.
- XI. *General Statistics*—Embracing banking, railroads, insurances, navigation, intercommunication; learned and scientific societies; crime, pauperism, charities, public and benevolent institutions; militia, newspapers, &c.; application of parish taxes; expenses of roads, levees, &c.; number of suits decided in different courts; expenses and perfection of justice; number of parish officers, lawyers, physicians, &c.
- XII. Date, extent, consequences, and other circumstances of droughts, freshets, whirlwinds, storms, lightnings, hurricanes, or other remarkable physical events, in your section, from remote periods; other meteorological phenomena; changes in climate, &c., &c.
- XIII. *Literary productions* emanating from your neighborhood; your associations, if any; what manuscripts, public or private records, letters, journals, &c., or rare old books, interesting in their relation to the history of Louisiana, are possessed by individuals within your knowledge. State any other matters of interest.

try, habits and condition of a people should be accurately understood, before attempting to extend or improve them. No State has been behind Louisiana in the negligent manner of preserving her records, and the facts of her population and industry, and the result is, that no State has had more contradictory and voluminous legislation. To implant a new principle, or to convince the understanding of a whole community upon a matter, almost for the first time brought before them, involves a revolution, requiring both time and patience.

There is something formidable to most persons in a long array of figures, and many are disposed to smile at the minute labors of the statistician as impracticable and useless. Yet, from these may be deduced the wisest rules in the government of society and in the amelioration of man. Those who will not give themselves time to examine a subject, are the speediest to condemn. One readily acquires the character of a cold abstractionist or dull plodder, who devotes any consideration to the results of statistics. The labor is almost thankless, and must be endured without sympathy. The South has thus produced scarcely a single statistician, whilst at the North, the number, though small, is continually increasing. We know that, to make an able report, or a convincing demonstration in Congress or in the departments of government, nothing is more important than to be possessed of the facts and figures of the subject. Hence the government begins now to make the most elaborate collections and returns, and sends out in addition to the decennial census blanks, innumerable circulars to every quarter of the republic.

The undersigned does not doubt, that in the future history of this Bureau, should the legislature pursue the plan of publishing its annual reports, a vast amount of practical information will be furnished by the voluntary responses and communications of citizens in all the various classes and pursuits.\* As the importance of the matter becomes better understood, from the published results, the fullness, minuteness and reliability, of the reports will, in a higher degree, be secured. At the same time to rely exclusively upon these responses, would be to stop very far short of that excellence to which the office may with propriety aspire.

The important consideration should guide our movements, that the labors undertaken are not solely for the benefit of a single State, but extend their influences over the nation. Louisiana is one only of a large community of States, distinct, yet intimately dependant the one upon the other, and interested, in the last degree, in each others' welfare and progress. These States have a common government, but with

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\* A large part of the information obtained by the Federal government, and published in its reports, is obtained through the agency of circular letters. It was thus Mr. Walker published from the Treasury, in 1846, a volume showing the condition of our industry, North and South. His circular embraces sixty questions; among others, "Capital invested in Manufactures," "Amount in Materials," "Profits on Capital," "Annual quantity of Manufactures," "Persons employed," "Period," "Rates of Wages," "Agricultural Products," etc. It is thus the Patent Office is enabled, annually, to publish its voluminous reports. Circulars are sent to every hamlet in the nation, and the returns are digested so as to present a thousand pages of valuable matter. After all, however, it is only from the decennial census, obtained by regular and salaried agents, that precise and accurate results for the whole country can be had.

such circumscribed and restricted powers, and so far removed from its various members, that the information it can obtain relating to these members, however important in influencing its action, is necessarily meager and defective. The States, themselves, paramount within their respective limits, by their legislative provisions, official collections and reports, can only supply the defect, in any degree worthy of the subject, and were they but to move conjointly in the matter, each organizing a statistical Bureau, their annual reports, condensed and digested by the federal authorities, would furnish a volume of practical and reliable statistics which no country in the world has ever excelled, and whose value would be beyond calculation.\*

In this view the undersigned inclosed a copy of the circular prepared by him to the Secretary of State of each State in the Union, requesting the matter to be brought before the legislatures at an early day, in order, if possible, to secure the desired coöperation. A copy was also sent to the Commissioner of the Patent Office, at Washington, together with a report upon the organization of the Bureau, and upon the general statistics of Louisiana, which appears in his annual volume for 1848.

It is gratifying to reflect that Louisiana has been the first State in the Union to perceive the advantages of this system, and attempt its application. Already has her example been pointed to in terms of highest commendation and suggested for adoption. Though other States have surpassed her in the number and extent of statistical publications, she alone has made provision for a systematic and permanent office of statistics.

In his report of January, 1848, Hon. Edmund Burke, Commissioner of Patents, remarks: "I have been informed that a bill has been introduced and is now pending in the legislature of Louisiana, providing for the organization and establishment of a BUREAU OF STATISTICS. It is ardently hoped that the measure may be carried, *and that the example which will be thus set by Louisiana, resulting from an enlightened view of the importance of her great interests, agricultural and commercial, will be speedily followed by other States of the Union*—all have industrial interests of sufficient importance to justify the establishment of such a Bureau in their respective governments." In the volume for 1849, language still stronger is used by the Commissioner: "In the pursuit of its statistical investigations, this office has keenly felt the want of means for obtaining accurate and reliable information concerning the great industrial interests of the country. No provision

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\* Our government is one of limited powers, and we ought to guard against their extension. It should not come down too often and too closely, and pry too much into individual action. Its theory is, to do what the States cannot do so well. But who shall be so generally informed or so capable of obtaining all the necessary information in the minutest details, in regard to the circumstances of a people, and their industry as the State itself. The compass being small, how much more accurately the investigation. The State government is the natural and proper repository of all the facts relating to its people, and it has met with no obstacles in obtaining them. The General government, it is true, should make its digests from the State reports, &c., &c. In the debates in the Senate the present year, we find the positions above taken sustained and advocated with great power by several senators.

has been made by the General government for obtaining such information except in relation to our foreign commerce, and but very few of the States have adopted measures for obtaining authentic information in relation to these industrial interests. *Massachusetts and Louisiana are in advance of most other States* in their legislation upon these subjects. In the former State, very full returns are obtained in short periods of a few years, if not annually, of her industry and resources; and in the latter a BUREAU OF STATISTICS has been established, etc., etc. A most interesting view of the vast resources of this great republic would be annually exhibited, if all the States would follow the example of Louisiana and Massachusetts. The statesman and legislator, to whom the people commit the destinies of their common country, would then have at their hands ample material to aid them in the intelligent discharge of their momentous and responsible duties, without which they are like blind men feeling their way in the dark."

A special committee of the legislature of South Carolina, in the session of 1848, after having ably shown, in a variety of instances, how little information existed, in regard to the resources of that State, declare, "There are facts and considerations which, properly exhibited, would prove the necessity of providing some such organization, as would lead to a correct understanding of these important matters; and the insufficiency of the matters here presented, only serves to show conclusively that we have been heretofore neglectful of those means of information which are calculated to elicit correct apprehensions of our advantages and duties. We know not how strong we are at some points, and how weak we are at others. The appointment of such a committee (*i. e.* on commerce, agriculture and mechanics) will soon lead to the establishment of an efficient BUREAU OF STATISTICS, which will be the means of collecting and disseminating statistical information touching all the interests of the State, of the most valuable kind."

Governor Seabrook, in his message of December last to the legislature of the same State, says, "To ascertain with correctness the resources of a country which a beneficent Being has so prodigally endowed, is among the paramount duties of the representatives of the people. Their development and improvement, when ascertained, might properly be entrusted to the people themselves.

"As inseparable from the enterprise, should the wisdom of the legislature determine to prosecute it, I recommend the careful collection of STATISTICAL INFORMATION on all the branches of industry. By the possession of facts and materials, lucidly arranged and methodized, we shall be furnished with complete data as to the present state of the population, white and colored; concerning agriculture, commerce, navigation, manufactures, trade, finance, health, and need of whatever may be interesting or instructive to our citizens and their rulers. Under our political organization, and in the condition of society which the Southern States exhibit, the value of this knowledge will soon become manifest and duly estimated. It will tend materially to facilitate many of the most important duties of the public functionary; enable the legislature to adjust and regulate the various interests of society, and to reduce a chaos of details, on matters requiring their



action, into order and system. Nor will the people themselves be less benefited. To know all that concerns the land of their birth, is a matter of pride and deep interest."

The suggestions of the Governor are, we understand, soon to be carried out, and a number of distinguished citizens of the State have had the subject in consideration, and are by correspondence, &c., devising the best method to ensure success. The State has already, by a handsome appropriation secured the publication of the reports of her central agricultural society in one large volume, embracing a vast amount of information relating to the staples of cotton, rice and corn, the negro population, negro laws, soils, minerals, manures, etc., etc.

In the legislature of Rhode Island, now in session, a memorial was referred to a select committee, but a few days ago, requesting the appointment of a SUPERINTENDANT OF STATISTICS, with a suitable salary, whose duty it shall be to collect all the information possible, relative to the population, the agricultural and other products of the State, its resources of every description, the commerce of the State with sister States and foreign countries, the nature and value thereof, the mechanic arts and manufactures, public education, religion, public health, and such other information as may, from time to time, be required of him, having a bearing upon the industrial and progressive history of the State. The author of the measure in a letter to the undersigned, compliments in handsome terms the action of Louisiana, and adds that Rhode Island will undoubtedly cooperate.

Massachusetts is far beyond every other State in the pains which she takes to preserve even the most minor particulars relating to her population and industry. It is to this that we may attribute in a degree the rapid advances of that commonwealth, and her course should serve to guide each of her sisters. She appropriates, annually, large sums to the numerous agricultural associations within her limits, in aid of their premiums and publications. On the table before me are a large number of her published reports and documents, furnished kindly by the Secretary of State at my request. A list of these will aid us in understanding the system she adopts, and perhaps stimulate our own efforts.

No. 1.—*Statistics of the condition and products of certain branches of industry in Massachusetts.* This is a volume of 400 closely printed pages, mostly figures, published in 1845, prepared from the returns of the assessors, who were provided with blanks by the Secretary of State. This volume is admirably complete, and is expected to be followed up at short periods by similar publications.

No. 2.—*Abstract of the Returns of Agricultural Societies.* A volume of 160 pages, made up from the returns of all the agricultural societies in the State, who, as a condition precedent to the receipt of the bounty allowed, must report *annually* the amount expended by them, premiums allowed, reports of committees, names of officers, addresses delivered, etc., etc.

No. 3.—*Abstract of Massachusetts School Returns*, containing 336 pages, and published annually by the Secretary of State. This volume was digested by the Hon. Horace Mann from the reports of the School Committees in all the 309 towns of the State, which amounted in

manuscript, as he says, to 5,500 closely written pages, and is very full upon even the merest details of her education system.

No. 4.—*Insurance Abstracts*. These are large pamphlets published annually by the State, giving the operations of every incorporated company, from returns required by law.

No. 5.—*Bank Abstracts*. Similar annual publications, showing the capital of every bank in the commonwealth, circulation, profits, debts, deposits, resources, dividends, etc.

No. 6.—*Annual Reports of all Rail Road Corporations*.

No. 7.—*Annual Reports of Lunatic Asylum*.

No. 8.—*Annual Reports, Births, Marriages, and Deaths*.

These are volumes of 125 to 150 pages each, and are prepared with great care from the returns made by the clerk, etc., in each of the towns in the State. Nothing like this is found in any other State of the Union, and the general deductions made from the tables have high influence in the regulation of life and society.\*

Many of our large cities have been equally liberal in the documents prepared and published, showing the progress and pursuits of their population. Prominent among these have been Boston, New York and Charleston, which have contributed each large volumes of statistics, so condensed and presented, as to show every thing that could be desired in every department, and to afford the highest and best evidence of the actual condition of the people. Nothing could be more complete and admirable than these volumes. They furnish, as it were, a map of the operations of a city from the earliest period, down to the moment that we examine them. Should it not be hoped that our cities, and New Orleans in particular, the second important commercially in the Union, will provide for similar volumes, by public appropriations. It affords me great pleasure to say, that a movement has already been made for the purpose by Mr. JARVIS, a member of the General Council.

Since undertaking the duties of this office, the undersigned has been

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\* In the last report Mr. Shattuck quotes from the 5th Report of the Registrar-General of England.

"The census has been taken with regularity in the United States of America, but abstracts of the register of deaths have only been published by the cities of Boston, New York, Philadelphia, and some of the more advanced towns. No correct life-table can therefore be framed for the population of America, until they adopt, in addition to the census, the system of registration which exists in European States. Since the English life-table has now been framed from the necessary data, I venture to express a hope, that the facts may be collected and abstracted, from which life-tables for other nations can be constructed. A comparison of the duration of successive generations in England, France, Prussia, Austria, Russia, America, and other States, would throw much light on the physical condition of the respective populations, and suggest to scientific and benevolent individuals in every country, and to the government, many ways of diminishing the sufferings, and ameliorating the health and condition of the people; for the longer life of a nation denotes more than it does in an individual—a happier life—a life more exempt from sickness and infirmity—a life of greater energy and industry, of greater experience and wisdom. By these comparisons, a noble national emulation might be excited; and rival nations would read of sickness diminished, deformity banished, life saved—of victories over death and the grave—with as much enthusiasm as of victories over each other's armies in the field; and the triumph of one would not be the humiliation of the other; for in this contention none could lose territory, or honor, or blood, but all would gain strength."

addressed from many quarters of the Union, in regard to its organization, and has answered numerous communications soliciting information concerning the industry and resources of the State. To the National Census Board he addressed, through the public prints, a series of letters, commenting upon a proposed innovation upon the accustomed method of obtaining the census, and furnishing a variety of suggestions and data relating to the State of Louisiana and the general interests of the country. These letters drew out a response from the Board, and it is believed were not without influence, in producing a change of plan, and in securing for the South, a system likely, in the result, to prove much more advantageous than the one originally contemplated.\*

Not among the least important duties of the Bureau is that of replying to the continual applications of State and Federal officers for information upon particular branches of industry, and particular institutions, &c., existing among us; and in preparing, from time to time, such tabular exhibits of resources, of revenue, expenditures, &c., as may be required by either branch of the legislature. It is clear that these duties should be charged upon a special office.†

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\* CENSUS LETTERS.—These letters discussed elaborately the following subjects: Plan of Census enumerations, mode of preparing blanks, whether special blanks applicable to the several States, how far the South is interested in these blanks, population of Louisiana, employments population, number insane, deaf and dumb, educated and uneducated in the State, investment of capital in Louisiana, annual product of industry, capital invested in sugar industry, lands and levees in Louisiana, importance of statistical bureaus, errors in the census enumerations and mode of amendment, wages of labor, cost of transportation, internal improvements, omissions in previous censuses, population of Russia and United States contrasted, statistics of population, history of census enumerations, analysis of American censuses, pauperism of the United States, population of native and foreign birth, education in the United States, at the South, vital statistics, or, statistics births, marriages and deaths, importance of such data, experience of European nations, &c., &c. The references to all these matters were necessarily brief. In return, the Census Board thus expresses itself: "Were the board furnished with letters, equally satisfactory, from each State in the Union, it would be much better able than it now is, to arrive at satisfactory determinations, &c. The importance of bureaus of statistics for the several States, and a general bureau of statistics at the seat of government is manifest to the mind of every individual, &c. It is certainly complimentary to the State of Louisiana, that she has been the first to establish a regular office of statistics," &c. The official organ also noticed the series of letters, as follows: "But apart from their strictures upon the plan of varied blanks, the articles derived importance from the amount of reliable statistical information they contained of the productions and resources of the South, and especially of that portion of it embraced in the valley of the lower Mississippi. Had the invitation of the board, which were extensively circulated in all the States and Territories, soliciting information upon every branch of production, mineral and other resources peculiar to each section of the Union, been generally responded to in the same spirit and with the knowledge displayed in these communications, the plan that is condemned would have been much easier of satisfactory execution. Had the other State bureaus of statistics, with a chief as competent and willing to advance the ends aimed at in making a census as Louisiana possesses, the general object of the board would have been greatly promoted."

† A letter from the Commissioner of Patents, now filed in the Bureau, furnishes an example. To answer this long and patient investigation is needed and will be given. The Commissioner says, "Endeavoring to trace up the history of American inventions, and supposing that interesting facts may be hidden in the archives of the various States, particularly in the records of patents, of which

The first purpose to be accomplished by the Bureau, should undoubtedly be the preparation and publication of an elaborate report, extending back, from the earliest settlement of the State, and including every particular relative to its population and wealth. Such a report the undersigned has had in view, having collected, and being still engaged in collecting, a variety of information for the purpose, from every available and reliable source—correspondencies, official documents and reports, historical works, local records, files of newspapers, &c.

### PROPOSED STATISTICAL COLLECTIONS OF LOUISIANA,

CONTRASTING EACH PERIOD OF HER GROWTH, AND COMPARING THE RESULTS WITH THOSE PRESENTED BY THE OTHER STATES OF THE UNION.

#### PART I.—TERRITORY AND IMPROVEMENTS.

Date of discovery and settlement—origin and growth of parishes, geographical descriptions and statistics of rivers, mountains, islands, sea coasts, lakes, etc.; geological structure, minerals, forests, natural products; public lands and land system; lands in cultivation; arable lands, pastures, etc.; value of lands and productiveness in different sections; lands capable of reclamation; navigation of rivers and lakes, character of harbors, climates, meteorological phenomena and diseases; internal improvements, railroads, canals, turnpikes, bridges, levees and levee system, crevasses, etc.; facilities of communication, statistics of freights, passages, length of routes, etc.; post roads and post offices, etc.

#### PART II.—POPULATION.

Growth of population from settlement—colonial population; analysis of census 1800, census 1810, census 1820, census 1830, census 1840, census 1850; comparison of all the censuses; insane, idiots, deaf, dumb, blind, proportion of sexes, marriages, births, deaths, old, young, productive, unproductive, paupers; indians, slave and free negro population; emigrants; foreign, naturalized and native population compared; proportion native and foreign origin; employments of population—agricultural, manufacturing, commercial; physical condition people, wages, proportion wealth, relative advances different classes population; education, professions, colleges, schools, societies, libraries, newspapers, charities, religious sects, statistics of education; proportion educated at home and abroad, expenses of education, school returns and appropriations, etc.; the militia—pensions, taxes, revenues, expenditures, debt; presentation in Congress; density of population; crimes, punishments, penitentiaries, condition of people as compared with other periods and States, etc.

#### PART III.—INDUSTRY.

CHAPTER I.—AGRICULTURE: growth of agriculture—improvements in; agricultural staples with their progressive increase; statistics of all agricultural products, capital and profits in agriculture, produce of forests, cattle, stock, wool, poultry, agricultural societies and publications, application manures, agricultural machinery, probable new products, condition of agricultural population, etc.

CHAPTER II.—MANUFACTURES: character of manufactures, statistics of all branches of manufacture, comparative progress of manufactures, capital in manufactures, revenue from, per cent., profit and wages, home manufactures consumed or exported, consumption foreign manufactures, manufactures capable of being introduced.

CHAPTER III.—COMMERCE; imports and exports, before the purchase in value, quantity and kind; imports, exports, etc., from the purchase to 1812, from 1812 to 1850, in value, quantity and kind; progress in trade with each contempora-

some have been known to have been granted under colonial rule, and others by more or less of the States previous to their conceding the right to the general government, I respectfully request to be furnished with copies of any such documents," &c., &c.



ry State or Dependency, in value, quantity and kind; statistics of all commercial commodities; customs, port and quarantine regulations; chambers of commerce; conflicting mercantile systems of the States; bankrupt system; money, banks; trade and commerce several cities, growth of cities; navigation, light houses; new proposed markets, comparison with other States.

CHAPTER IV.—MISCELLANEOUS: including a digest of the back reports of the various State offices—auditors, treasurers, engineers, land offices, etc., general statistics, &c

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This Report, which will occupy a volume of three hundred closely printed pages, a large part being tabular work, on the plan of the Massachusetts' documents, is respectfully suggested to the legislature for publication. In preparing it, the undersigned would adopt the foregoing plan, adhering as closely to it in the details as possible, and neglecting no head upon which there shall be any chance of obtaining reliable data.

There is something peculiar in the origin and progress of the population of Louisiana, made up as it is from such a mass of heterogeneous sources, and living to so great an extent without amalgamation, which distinguishes it from every other State. It becomes us, as far as possible, to collect the fleeting traditions of this population, and to condense for ready reference whatever facts may be illustrative of its condition and prospects. The liveliest interests must attach to the subject, viewed in whatever light we please.

In discussing the soils, minerals, natural products, etc., of the State, we are met almost at the first step by the criminal deficiency of information which exists among our citizens.

Scientific surveys of the State, it is true, were conducted a few years ago by gentlemen, liberally compensated by the legislature, but the manuscript reports, from the culpable negligence or carelessness of parties, it is difficult to say who, are no where to be found among our archives. It is impossible to tell how much the State may have lost, or how far the existence at that time of an office of the character of this Bureau would have protected against the contingency. At the present moment we know literally nothing of the geology of the State.

It is evidently too late now to discuss the merits of geological explorations. They have been ordered by a large number of the States, and are becoming every year more frequent and thorough. A bill is now pending before Congress, providing that a portion of the public lands within the States be appropriated for this purpose. The facts elicited in the prosecution of such surveys are essential to the art of mining, to the construction of roads, canals, harbors, buildings and to the improvement of agriculture. In this last particular they are chiefly valuable. Soils consist of organic and inorganic ingredients—the first giving rise to fertility, and the last being indispensable in all improvements. These inorganic compounds, whether clay, lime, siliceous earths, magnesia, salts of iron, manganese, potash, soda, etc., etc., wherever greatly deficient must be supplied, and to do this a knowledge of their nature and character becomes necessary. To no other science in so high a degree is agriculture indebted for its advances as to geology. Its successful investigation in the United States was first begun in 1807 by Mr. McClure. In 1814 De Witt Clinton urged in

New York a geological, mineralogical, botanical, zoological, and agricultural survey, which has since been effected and the results published in a magnificent series of quarto volumes, at the expense of half million dollars! North Carolina has the merit of having sent the first geologist into the field—Professor Olmstead, whose report was prepared 1825. South Carolina, Virginia, Massachusetts, and many other States, have followed the example, and the science is now being introduced into the leading colleges and universities of the country.

It is worthy of consideration, whether Louisiana may not have it in her power, in making provision at any future time for the permanent organization and establishment of her new university, to perfect a knowledge of the State. In any endowment made to the institution, a stipulation should be inserted that the professors of geology and the other natural sciences, in the long vacations so necessary in this climate, be required occasionally to traverse the State, presenting the results of their explorations in regular systematic reports. The plan is entirely practicable, and whilst it would increase the value and efficacy of the institution, would confer incalculable advantages upon the State at large. To the university should belong these duties; and it would be but carrying out the principle now urged upon Congress, if a considerable part of the public lands lately donated to the State should, after being reclaimed, if they ever are, be set apart as a fund for the performance of this work (including observations upon the general hydrography of the State), and for the general interests of the university.

In many States of the Union, a multitude of facts, concerning the soil, traditions, localities and population, are brought to light and published through the operation of historical, statistical, and other societies, scarcely one of which we have in Louisiana. Twelve years ago, it is true, a few of our citizens formed an historical association, which fell into decay, and was revived within the last four years, by electing Judge Martin to the Presidency, and afterward Judge Bullard. The practical operations of this society have been chiefly in the collection of books, etc., in which it has been aided by the legislature, with a view to future usefulness. One of the members, John Perkins, Esq., of New Orleans, now in Europe, in the most liberal and intelligent spirit, has had a digest made in three volumes, two of which have been received, of all the documents contained in the various departments of France relating to Louisiana, donating it to the State for the use of the society. In a letter to the undersigned, on forwarding the first volume, he says: "I have presented through you to the society, a summary of our history, embraced in one large quarto volume of 500 pages, reaching down to 1710. I must ask your especial examination of this volume, for I believe it will be found to contain matter of much interest that has never yet been published. The compilation of the rest of the documents is progressing, and I believe that by next fall the State will be in possession of a complete index to all the papers in any of the French archives pertaining to our history." The full return of Mr. Perkins's labors will be found in the appendix to this report.\*

In investigating the numerous topics connected with population, our

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\* See last pages of this number of Review.

progress is almost entirely impeded by the total neglect of nearly every species of record existing among us. Careless as has been our course in regard to the statistics of wealth, we have been infinitely more careless in those that pertain to life and mortality. In vain has the importance of a registration system of births, marriages and deaths, been pressed by statisticians in every part of the Union, by committees of medical associations, by the late National and State Medical Conventions, &c. The public mind will not be brought to an appreciation of its value and influence. Massachusetts still remains the only State in the Union which has *successfully* set up such a system, in imitation of Great Britain and others of the more advanced European powers. Several of our States have evinced a disposition to be active, and New York, it is believed, has even passed a registration law. In Louisiana, at different periods, we have had enactment upon enactment. That of 1811 makes the parish judges recorders, with a special recorder in New Orleans. The act of 1819 fixes a penalty for not recording in New Orleans. There have been several other legislative provisions, but what have been the practical results of the whole?

It is scarcely necessary to remark that our *registration system* has been entirely inoperative for any of the purposes advocated by vital economists. Louisiana is peculiarly interested in health and mortuary statistics, as it is believed no State in the Union has suffered more from the erroneous impressions and misrepresentations that have gone abroad, which we ourselves have not the means to correct. Were the facts even against us, a faithful exhibit of them would tend in the result to improve our sanitary condition. The experience of all countries preserving such records, shows a marked amelioration of society, diminution of disease, and extension of the average period of life. The physical condition of man has improved in equal pace, with the knowledge of the causes affecting him and their degree of intenseness in different localities. There can be no question either, that "the white, black, and other races, present peculiar moral and physical characters, which should not be overlooked by the statesman, whose legitimate aim can only be the prosperity and happiness of all nations." We are strikingly deficient in knowledge of the black and colored population, although living among us for nearly three hundred years. Investigations, notwithstanding their importance, have never been made in this field, until very lately. Is it true that the negro is long lived at the South, and the reverse at the North, whilst the mulatto is always short lived, and never prolific? Is not the real merit of the slave question involved in the *physical characteristics* of the races, and in discussing it, are not the *facts* of births, average lives, diseases, longevity, deaths, increase, vital force, &c., respectively at the North and the South, in freedom or in slavery, equally if not more important and decisive than the admonitions of St. Paul or the laws of Moses? We want facts, full, minute and reliable, upon every feature of this subject.

In these exciting times, when fanaticism runs riot, endangering the existence of the Union, it becomes the South to be furnished with a reason for her faith. We have almost universally neglected the statistics of our negro population. The North, so minute in other respects, is silent here. Can we tell from their tables how far freedom proves

favorable to the vitality, morals, or physical comfort of the negro? Is there not reason to believe, from the little we are allowed to know, that amid all the cant of universal freedom he is there short-lived, vicious, depraved, and wretched in the last degree? On the other hand, under slave laws, is not the very reverse, in every respect, exhibited? We call again for facts, and they are within our reach. The most overwhelming evidence is in the power of the South, with an ordinary degree of pains. It is time to go further into these matters than mere general statements. "I think we may safely conclude," says Dr. Nott, of Mobile, "that the negro attains his greatest perfection, physical and moral, and also his greatest longevity, in a state of slavery. The colored population of Charleston show not only a lower rate of mortality than any laboring class of any country, but a lower mortality than the aggregate population, including nobility of any country in Europe, &c., &c." Again, "I have said enough to make apparent the paramount importance of negro statistics. If the blacks are intellectually inferior to the whites—if the whites are deteriorated by amalgamation with the blacks—if the longevity and physical perfection of the mixed race is below that of either of the pure races, and if the negro is by nature unfit for self-government; these are grave matters for consideration." "Perhaps," says Dr. Ginor, physician, in charge of the eastern penitentiary of Pennsylvania, "the most striking disproportion is between the white and colored deaths. If my experience, &c., justify, I would say, without hesitation, it is owing entirely to the utter neglect by the latter of the necessary means of preserving health, extreme sensuality, &c. This opinion I believe myself in possession of sufficient facts to substantiate." These are but items from a volume of testimony.\*

A history of the education system of Louisiana would be pregnant with much instruction. We have not been deficient in liberality, and yet the fruits of our efforts are altogether unsubstantial. How many prominent Louisianians have ever been educated at home, though upon schools and colleges the State has expended untold thousands? Should we not have some record of this history, the extent of these appropriations, and some approximations to the actual results? Let us preserve, too, the workings of our new system in digested tables from the annual reports of the State superintendent. It can only be made popular with the people by disseminating knowledge in regard to its operations.

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\* In a very late report of the Prison society, published in the Philadelphia Ledger, we learn, in that city, that an analysis of tables, kept for nineteen years, proves a difference of 13.14 in the hundred, between the deaths of whites and colored inmates of prisons, &c., &c. In other words, there are four blacks to one white that die in prison, and in the community not quite two to one. "It is," says Dr. Nott, in his able lectures on the physical history of man, "capable of demonstration, that in all our Atlantic and north-western States, the mulattoes are less prolific, less hardy, shorter lived, more liable to premature births, and are, in every respect, physically inferior to either the pure whites or blacks; and further, that the mulattoes, descended from the pure white and black races, are true hybrids, which would become extinct, if left alone to propagate among themselves, &c., &c. When we come further south, as at Pensacola, Mobile, and New Orleans, this law becomes much modified, and we find a class of mulattoes who are long lived, more hardy, more prolific, and in every respect much superior to those of the North. These are of the mixed negro and Celtic blood." &c.



The agriculture of Louisiana is almost her chief reliance and source of opulence. In proportion to population, the total of her annual crop exceeds that of any State of the Union, and she is, perhaps, the richest of them all. The statistical results of this agriculture must be very important, involving all the considerations of products, prices and profits, how far they have influenced each other, and how far labor has been, by the advancement of science, rendered more and more productive. Such tables should go back, very far, marking the advent and progress of new staples, and the decline and abandonment of old ones. There has been an occasional publication from a private source, showing, in the particular of sugar, the individual and aggregate crops, which, with all its defects is very valuable. The extent of our cotton crop is difficult to be inferred without much patient calculation, and few can make a tolerable approximation. It is important to know how far sugar is substituting, or is likely to substitute, cotton. We have rice lands in almost unlimited extent, capable of rivaling those of Carolina, and their yield is even now considerable. If the State should diversify her industry, here is a source, almost unheeded, of future wealth. Useful facts could readily be embodied. Again, tabular statements of the expense in maintaining slaves, the relative production and cost of slave and free labor, the value of slaves at different periods, their increase, &c., have a high degree of interest. So also of the value of lands, in different sections of the State, and their productiveness, swamp lands, lands in cultivation or unreclaimed, public lands and their administration, &c. Then there are a multitude of facts, in regard to the extent and cost of the levee system, the loss by crevasses and their periods, the operations, as far back as can be had, of the internal improvement system of the State, which has taken place already among its most costly and cumbrous machinery, and bids fair to play even a more important part in the future. \*

\* **LOUISIANA AGRICULTURE.**—The SUGAR industry is every year becoming more considerable in Louisiana, and is extending through the other southern States. How far greater can this crop be stimulated, and under what discouragements? We call it a forced crop, but our skill in machinery, and enlightened management have compensated much. It is but a few years since science has been applied, and its strides have been amazing. We only now begin to inquire the conditions of prosecuting successfully this industry. Planters seek for light from every source, and communicate their information freely. Can we compete with the West Indies, with a free trade system, and with our highest improvements for the whole demand of the Union, and in foreign markets? What are the limits of this supply and demand? Dr. Evans suggests to the planters preservation of notes upon many points, to which we add others of our own: "Chemical character of soil." "Mode of cultivation pursued." "Nature and quality of manure." "Weight of canes per acre." "Their description, whether plants, ratoons, &c., age, &c." "Quantity of juice expressed." "Density of that fluid and other peculiarities." "Amount of sugar and molasses obtained." "Kind of force employed." "Kind and composition of fuel." "Expense of machinery and improvements." "Results in drainage." "Physical condition and vitality of slaves." "Expense of maintenance." "Food, clothing," &c. "Products," &c.

Millions of dollars are lost to the South, from the impossibility of obtaining reliable information about the cotton crops. Presumptions will take the highest figure in a doubt, and the buyers control the price. Sales are effected before the full effect of deficiency in a short crop can be known and have an influence. It is difficult to propose a remedy, but such may possibly be devised. In fact, the whole cotton interest has been badly understood, and the notions of the

Had Louisiana, like most of her sister States, agricultural associations, it would be easy, from their reports and documents, to cull a greater part of the information suggested. The reports of such societies in Massachusetts, New York, South Carolina, &c., are voluminous and invaluable. Our own citizens have, most unfortunately, never attained to any high appreciation of the results to be accomplished by this means. We had, indeed, once an agricultural farm, whose history would be worthy of a narration, which fell, as it were, still-born, and without results. The enterprising gentlemen of Baton Rouge have also established two agricultural societies in their midst, falling successively into decay. The last of them celebrated four anniversaries, and distributed premiums to the State at large, at several highly interesting mechanical and agricultural fairs. The addresses, reports, &c., of this society, have been published. The legislature extended a fostering hand in its aid.

Is it not probable that the prosecution of the duties of this Bureau, and its publications, will stimulate the reorganization of the society upon a basis which shall be commensurate with the wants of the whole State, and would not Baton Rouge, now the capital, be much more appropriate for the meetings of such an association, which, every other year, could be held during the session of the legislature? The State might, even with propriety, grant a hall for its use, and, by small appropriations, after the fashion of Massachusetts, to be expended in the publication of proceedings and reports, encourage not only the labors of the central society, but the establishment of subordinate ones in the different parishes. First among the interests, to which government should devote its fostering care, is agriculture. It is the breast, said the celebrated Sully, whence the State derives support and nourishment. Can it be wondered, then, that enthusiasts everywhere, are pressing upon Congress, the establishment of an agricultural department.\*

wisest prove grossly wrong. Sufficient facts have not been observed and recorded. The capacity to produce has been esteemed unlimited—the disposition and ability to consume limited. The cry of over production went out of course, and intelligent men talked of convening the planters to reduce the supply. How much have such opinions depressed the industry? Had the facts been carefully compared and preserved, it would have been seen the average producing power *is limited—exceedingly limited*—that the climax has been, perhaps, reached, estimating the working force to be used, the appropriate lands, the vicissitudes of seasons, the advances of population, &c., and that the demand is at least equal, and very likely greater than this limit. The figures for the present year, taking the world over, will show an actual and considerable deficit. Shall supply ever again overtake demand?

\* AGRICULTURAL SOCIETIES AND FAIRS.—The cause of agriculture and the arts can be promoted in no way, more effectually than by the institution of societies, shows and fairs. The turf is applauded for its influences on stock, but is there nothing for the competition and rewards of public exhibitions? Perhaps every State in the Union is in advance of Louisiana, with respect to agricultural societies, and no State could derive more substantial benefit from them. The legislature should encourage such associations, and there are ways of doing it. Even our agricultural publications, come nearly all from the North, and are of little use to us. A memorial has been sent to Congress from Maryland, praying a donation of public lands for the promotion of agriculture in the several States. Agricultural colleges are among the appropriate means. The secretary of the Interior suggests an AGRICULTURAL DEPARTMENT at Washington. What the gov-

The manufactures of Louisiana, excepting sugar, which is generally classed otherwise, are the least important, almost of any State in the Union. The government census of 1850, will again reveal this humiliating fact. It is easy to say that capital finds better investments, but this is not true, as it is even going abroad.\* Mechanic industry meets, also, with little encouragement. There is no natural reason for this state of things, and we are very far from advocating artificial stimulants in the way of government patronage. To enlighten self-interest should be the aim, and that will effect the resolution. Let us know why we are in no better position in this behalf, what have been the causes contributing to our past failures, or diminishing the number of our experiments? How comes it, that, except in the State penitentiary, we have not entered the field of cotton manufactures, when all our sister southern States and cities have been in motion, when the material is around us in bountiful profusion, and it can be demonstrated, may be worked with the greatest possible advantage, and with the largest and most reliable profits?

Our citizens perceiving this, begin to embark their capital in the operations of other States. Can a community advance to high position without diversifying its pursuits, and is there not always surplus, or unproductive capital, capable of being diverted into the useful channels of manufactures? Too many facts cannot be accumulated here. But the other day, a movement was made, looking to the establishment of an extensive cotton factory in New Orleans, † and a rice mill, upon a similar scale, would seem to be equally promising. It is a mistake, to argue that the cost of labor will deter, when there are so many counterbalancing agencies at work. Paper mills and shoe factories are, also, peculiarly economical operations for a southern community. The re-

error of Virginia says, in his last message, is true of most of the States: "While Virginia has extended, with great liberality, assistance to education and works of improvement, she has never given to agriculture any encouragement whatever." Louisiana calls upon Congress to restore her degenerating cane by importations from the East, and gives a bounty to the silk grower. Cannot her statistical bureau, in some such way, be connected with agriculture, as to co-operate with a State agricultural society, and perform certain duties assigned by it? This is worthy of reflection.

The South has always been remiss in encouragement to the mechanic arts. The splendid exhibitions made by this department of industry at the North, and particularly in New York, attracts hundreds of thousands of spectators annually. The fairs in France and England, are on a scale of great magnificence. Thus far there have been very few in the southern States. Does the genius of invention necessarily dwell at the North, or have we not crushed it by our discouragement? The late splendid fair at Charleston, which included the products of Carolina, Georgia, &c., in innumerable quantity, and most exquisite skill and finish, is a triumphant vindication of the South. Premiums were allotted in every department. The products of southern industry have even taken premiums lately at the North. In Louisiana, our fairs were on a different scale, but they should be in the metropolis, and it is not doubted, they would give a stimulus to the arts in this quarter, which would, in time, destroy our subserviency. The artisan, as well as the merchant, rules the world, and there is no better proof than the approaching fair of all nations, to be held in London, and over which Prince Albert is to preside!

\* Our capitalists are now investing in the cotton mills of Cannelton, Indiana.

† The measure seems to have failed. The people of Feliciana are more in earnest.

sults of the first are almost a clear gain to the people at large, being derived from the otherwise worthless and wasted material, of every household. The cause of southern manufactures, is one of the highest of the age, and it is gratifying to see the extent to which it is pressed, without one clamor for the aid of Hercules in the struggle. This is a legitimate and proper business, and the time has perhaps come, when the southern and western States might unite in one great convention, for the purpose of extending their manufactures, upon a platform which shall not compromise or trample upon a single party principle—and for such a convention, what position more admirable than New Orleans? \*

Louisiana is dependent upon her position, for the immense commerce which is poured into her lap. The statistics of this trade are no where to be found digested, except for a few years, and we must search up the files of old newspapers to get them. What, too, are the advantages of position in an age like this, compared with those of exhaustless energy and intrepidity? The East has practically leveled the mountains and made a highway to her very doors, for the teeming products of the great valley we deemed in the day of our pride would be ours for ever by an unalterable fate. The mouth of the father of waters, commercially, may be as well at Boston as at the Balize! Already his floods are tapped by each of the Atlantic cities, down almost to our very coasts, and Charleston, Savannah and Mobile enter the field of competition with their northern cotemporaries. Thus is it that New Orleans has not grown with the progress of the great west in anything, like an equal ratio. Our figures might show relatively in this point of view a *decline* of the city within the last few years! The fact should arouse the attention of the whole State. Are there not modes of counteracting these efforts of our neighbors whose results are telling with so much force upon ourselves? We are supine and attempt not one single countervailing movement. Has public spirit died in our midst and do we only await the day of the ebbing tide to go with it wheresoever it flows? If not, then shall we, by studying accurately the advantages and disadvantages *intrinsically* of our markets and the course of administrative policy operating upon them favorably or adverse, be the better able to enter into open competition, maintaining every point that has been gained and marching onward to a high and brilliant futurity. If there are errors of policy they

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\* SOUTHERN MANUFACTURES.—The facilities, for manufactures of cotton, enjoyed by the South, exceed that of any portion of the world. Having the material on the spot, with abundant labor, the saving in transportation and other costs, will, alone, pay handsome dividends. An intelligent writer estimates the proportionate profit of the planter and the manufacturer, as follows: With three times the capital, the planters' profits are less; six hundred laborers in the field do not realize as much as 275 in the factory, &c., &c. Another recommends manufactures by the cotton growers themselves, our crop being estimated at \$55,000,000, being worked up at three cents the pound, two yards to the pound, and nine cents the yard, making the whole cotton crop worth eighteen instead of six cents the pound (the price last year) and realizing \$180,000,000 instead of \$55,000,000. The machinery necessary to work up the whole crop may be had for \$50,000,000. These facts should bring us to reflect, and the more of them we can collect, and the speedier, the better. A convention of cotton growers might well be called, to discuss this whole subject, and the South should spare no pains in collecting data.



should be amended, and let us not at the same time be indifferent to those great internal improvement movements of the age, which are to commerce what light and heat and moisture are to the vegetable world.\*

Indeed the commercial spirit has been at a low ebb throughout all the South, almost from the establishment of the federal government. Let us take Richmond, Charleston, Savannah, Mobile and New Orleans. Their annual exportation of agricultural products is immense. It is conducted in northern shipping and the return cargoes received at northern ports to be reshipped again with great expense to us, who sit patiently awaiting the result. The single city of New York will import six-fold more than all of our southern States taken together, and for our own consumption too. The South appeared once to be aroused upon the subject. Several great conventions were held with the largest delegations. Then were made the ablest speeches, the most profound and elaborate reports, the best RESOLUTIONS in the world, but there the matter ended, and all was rest again. There are no necessary reasons for southern commercial *inferiority*. Venice, a southern city, conducted the trade of all the East and was the entrepot of the world's commerce for the main period of her history. Antiquity refutes the libel that southern latitudes are unfitted for extensive commerce. The empires of Assyria, Egypt, Media, Persia and Arabia,

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\* COMMERCE OF NEW ORLEANS.—Though the natural advantages of our great emporium, commanding as it does so many thousand miles of navigable waters, be greater perhaps than those of any other city upon earth, yet, in the struggles of competition and the wit of man, they may be effectually neutralized and counteracted. The canal and the railroad car are brought into successful competition with the flat and the steamboat. The power of the locomotive has scarcely been tested, but such are the rapid improvements in the cheapness and efficacy of its construction and operation, that it may be doubted if in time navigation can compete even in the lowest description of product. The canals and railroads of New York, have struck the great West in its teeming midst and draw already to the Hudson from \$50 to \$75,000,000 annually, the latter figure verging very nearly upon the receipts of New Orleans. The thousand miles of Boston railroads are burdened with the rich freights of the valley. Baltimore enters the field and Virginia will soon float, in the James River, the flatboat which has been loaded near the falls of St. Anthony. Meanwhile Charleston and Savannah, with the keenest interest, press their works to the Tennessee and the Mississippi at Memphis, whilst our sister of Mobile has in construction a splendid work reaching to the mouth of the Ohio. What shall be the effect of all these works in successful operation in drawing off the products of the valley from their natural channel, and how shall we provide against that day? It is common to speculate upon the future greatness and grandeur of New Orleans, with eyes blinded to the causes adversely in operation. Is this wise and prudent? Should we not rather put in play machinery similar to that of our neighbors and add to what nature has given us by all the appliances of art. It is notorious that things are left very much to their own regulation in New Orleans, and that few are interested in the permanent good of the city at the expense even of slight present inconvenience. The result is, that abuses gain in strength and the sympathies of producers are against the city. Remove the necessity that brings them here, and without many and great ameliorations they are gone. It is proper to inquire into all these matters, and it is believed that, with some pains and labor, instructive facts could be gleaned and presented. Again the railroad, and canal enterprises of Louisiana, past and present, offer a curious subject for study, and it is fitting to know, how far their fate should deter future operations. Shall our State remain ever behind nearly all others in these improvements which are at the basis of commercial eminence?

were southern. All civilization came from the south—the Greeks and Romans were southerners. Were not all the southern Indian tribes on the discovery of America, more advanced in civilization than the northern? The great South deserves as much of our panegyric as the great West or North.\*

There is one department of American commerce that has never been fairly represented—THE HOME TRADE. The federal authorities give with great precision the details of \$250 or \$300,000,000 moving in the operations of foreign commerce, but not a fact is developed in relation to the perhaps \$1,500,000,000 in movement between different States or parts of the same State. There is no power in Congress to collect this data, and it is clearly the interest of the States to furnish it. Were all the facts continually before the people, showing the extent of transactions between the States and their mutual dependence, it would tend more to allay jealousy, encourage fraternity and strengthen the bonds of union, than all the republications of Washington's addresses the treasury could pay for.

Matters of more local interest also deserve attention. Our new Constitution gives the quietus to the whole banking system of the State. Why has this been, and what can be given of the past history of our banks, their organization and operation, the public indebtedness on their account, and public losses? How deeply interesting and instructive would this chapter in our experience, be, if carefully corrected and written. Our laws provide for monthly and annual statements of these banks, and they are sought with avidity by the officers at Washington; yet, to make them complete, year should be compared with year, and the results of our own State with those of others.

In the same connection may be discussed, as evidencing very much of a State's advancement, the various charities at work, and the extent to which they are pressed by the liberality of our citizens. The peculiar quality of our charity is to be unostentatious, but a sufficiency of facts is within reach to prove that it is not exceeded by that of any part of the Union. The suffering find ever a ready hand outstretched and an open purse. Have we societies for literary, scientific and other purposes—what are their results, whence their limited number and continued failures? So, too, the statistics of our libraries, newspaper and periodical press, &c., our jails, prisons, houses of refuge, and the criminal calendar, pauperism, lunatic asylums, hospitals and penitentiaries. In regard to the two last, a complete condensation of all the reports, running back as far as they can be obtained from the books, would have very great value.

But, however instructive these matters, clear and concise statements, showing the progress of the revenues and the expenditures of the State, as compared with other States, would be immeasurably more so. The resources of a people may be very great, and yet be exhausted by taxation. Others, under great physical disadvantages, will flourish from its absence. Legislative parsimony and legislative extravagance are equally to be deprecated. The mean in governing well, is to expend intelligently and advisedly. The idea is out that the people of

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\* Commercial Review, Vol. iv, p. 208.

Louisiana are heavily and unduly taxed, and that expenditures are allowed to accumulate without reason. True or false, injury to our industry results from the impression. To arrive at the facts, our tax rolls should be compared with those of other large and wealthy communities. The tables of revenues and expenditures should be brought together, digested and systematized, from a period as far back as possible, as is the custom of the general government, and the legislators and people should have them. Our eyes might be opened upon many points, and not a few reforms suggested. The complaint of the planting interests would seem to demand investigation. We should know the evil and the good, the wisdom and the folly, the truth and the error, of our ways, before the healing balm can be applied. Light in regard to the operations of government quiets apprehension and ensures contentment in the people; without it, there will not be wanting many attentive listeners to whomsoever shall preach—They are not governed so well as should be.

The offices of the Secretary of State, the Treasurer, Land Officer, Auditor, Surveyor and Adjutant-General, &c., all contain a mass of crude and undigested material, which, properly systematized and published, running back as far as the records go, must bring to light no inconsiderable information relating to the public offices, finances, land sales, militia, internal improvements, &c., of the State. The difficulty of making such a digest must be great, but the effort would be well repaid and the legislature realize the benefit. No more fitting time than this could be selected, when the offices removed to a new location are in process of thorough organization. The State has liberally patronized, at large cost, digests of decisions of laws, &c., elementary histories and historical records, until they have accumulated upon the shelves of her library. Have these any higher interest or importance than the work now advocated?

Independently of the other advantages to be derived from such a statistical volume, there is a consideration which should move us. The great question of power is now being raised between the free and the slave States and must soon be settled. The former have for a variety of reasons had the advantage of us in exhibiting their resources and strength. They have had all the statisticians to themselves and all the statistical reports. They have used them as powerful implements of aggression, and the South, having nothing to show in return, has been compelled to see her cause greatly prejudiced. Until almost the present day none of the southern states have regarded it at all important to secure records and returns of population and wealth. Not one periodical devoted itself to these subjects, though the North had many. We were taunted with our comparative weakness, poverty, insecurity, decay, and told that they were the natural results of our slavery! Having no facts to oppose, we were passive, and for the most part admitted the justice of the charge. We had not studied our own strength. Only yesterday, as it were, a gentleman well known to the Union, ELWOOD FISHER, Esq., in a public lecture at Cincinnati, broke ground in the matter, lucidly and ably investigating every point connected with it, and with even the meager data he could obtain, triumphantly vindicating the South and turning the scales upon our revilers, by exhibiting a much

higher average of wealth and comfort in southern communities! It becomes Louisiana to furnish the data for carrying out these investigations and for the more full and satisfactory justification of our institutions and ourselves.

The day has passed when the South will consent to be the victim of unlicensed misrepresentation or widely propagated error, but the reform begins first at home.

The lecture of Mr. Fisher was almost our first systematic vindication and should be read by every citizen throughout our broad limits. He examines the positions of the North and the South on the adoption of the federal constitution, showing the superiority of the latter then, and how the operations of government have played into northern hands. He compares the average of property in both sections and finds the South at least on a par and in most cases at the advantage. "The triumph of southern enterprise and capital," says he, "in the accumulation of wealth being established," &c., &c.; again, "thus have we fifteen southern states, one-half of the number belonging to the Union, occupying half of our territory, who present the extraordinary, and, so far as my researches extend, the unparalleled result of a population which has acquired greater wealth by agriculture than any other people in any other manner, and who have consequently given ascendancy within their borders of country life over city, in social and political power." Again, "Hence have we seen the fearful struggle of northern labor for subsistence; notwithstanding the immense aid it has derived from modern machinery and invention. But take from that labor the custom, and subject it to the competition of the South, where so much less is required for subsistence, and that so much cheaper, and the result would be as ruinous to the present system of the North as to that of the South. These two great systems have grown up together. That of the North could not have so much expanded without a market in southern agriculture—nor could this have grown so great, but for the demand and supplies of the North. Together they have flourished—together they must falter and fall. To restrict, therefore the territorial extension of the South, and by circumscribing its industry render it unprofitable, is to restrict and paralyze the prosperity of the North in all its departments. Together these institutions have marched harmoniously to that eminence and success which have won the prosperity of both at home, and extorted the admiration of the world abroad. If either should fall by the hand of the other, the crime would not only be fratricide—it would be suicide—and over the moldering ruins of both would deserve to be written the epitaph: 'Here were a people who disputed about the capacity of the African for liberty and civilization, and did not themselves possess the capacity to preserve their own.'"

However warmly and ardently the South may cling to the Union, and as sacred as it is to us by the associations of so much happiness and glory and power, we can never forget, for a moment, that eternal vigilance is the price we must pay for it, and that to prepare for the worst in almost every crisis, is to secure the best. The danger may be remote, and is as we believe and pray, for perish the hand that shall provoke the first blow in our ruin, but not the less should we know its extent and our powers of resistance. It becomes the South to increase its



strength and weight in the Union, construct its railroads, extend its commerce, build up its manufactures, protect its arts, endow its universities and colleges, provide its schools, and prepare, however the case may be, for whatever God has in store in that future, through which, to such a bad pass have matters come, no man can clearly see a single year. The madness or imbecility has not fallen upon us, with which it is said the gods afflict those whom they intend to destroy.

The first volume which is then proposed from this Bureau, covers of necessity an extensive field, embraces a wide detail and will constitute a repository of information concerning our population and industry in all stages of its progress, and as compared with other communities which does not at present exist in any of the States. It will form the ground work of all future labors of the office, and be always completed to date by the annual or biennial reports of the person in charge. The duties of keeping up after the foundation is laid, will be comparatively easy and the length of the reports not exceeding that of an ordinary pamphlet. For such duties it is believed the present salary allowed the superintendent, small as it is, will be found sufficient, or at all events no considerable addition will be demanded.

In the matter of establishing the office and preparing the voluminous report referred to, it must be evident at a glance that the remuneration allowed to the superintendent by law is altogether inadequate, and that no one, whatever his interest in the matter, would be likely to accept it. Hoping, as he does, so much from the practical working of the office in the future, and feeling so much the pride of an early advocacy and support, the undersigned is unwilling to jeopard its favor by any drafts upon the treasury, or demands for additional compensation. He is desirous rather to increase and extend in every manner its usefulness, even at a personal sacrifice.

The only appropriation that is asked from the legislature, is the sum of five hundred dollars, as a contingent fund to defray the expenses of the office in the next two years, viz.: the printing of circulars, stationery, postage, purchase and copies of documents, blanks and other incidental expenses, etc.

There are details relating to the organization of the Bureau which the undersigned will at a future day suggest. In the present state of matters, no charge perhaps can be recommended with propriety, likely to add materially to the expenses of the office. In the course of a year or two, the legislature will be able to form better notions of its value; and, as it works itself into favor, be disposed to greater liberality. In this case would be suggested statutory enactments in its aid, rendering it obligatory under penalty, upon the assessors, coroners, public institutions of every kind, charities, clerks of courts, hospitals, inspectors, justices of the peace, district attorneys, recorders, notaries, sheriffs, auctioneers, inspector general, &c., to report annually and fully to the Bureau. As this would induce some complication and increase of expense, and is suited to a more advanced stage, it is not at present recommended.

It is, however, respectfully suggested, that the legislature, as has been done in New York and several other States, order a copy of each newspaper, published in the parishes out of New Orleans and two in

that city, to be subscribed for regularly and filed in the office of the Bureau. These volumes will in time possess great value and usefulness. It would be also very desirable, if capable of being effected by any reasonable means, to obtain the files of at least one journal, running back as near the beginning of the century as possible. The State possesses no such file, from which the minutæ of her history for the last half century could be derived, and the want of it is often most seriously felt.

With consideration,

J. D. B. DeBow.

### ART. III.—RAILROADS TO NEW ORLEANS.

NEW ORLEANS—CAN SHE COMPETE WITH HER RIVALS FOR THE COMMERCE OF THE WEST.

EDITOR of the Commercial Review:

IN an address of Governor Bebb, of Ohio, before the Mercantile Library of Cincinnati, quoted in the October number of the Commercial Review, the following passage occurs, which it behooves the citizens of New Orleans to ponder well:

"Oceans are no longer the great highways of nations. The railroad has made the land as subservient to commerce as the water. Railroads are to be the artificial rivers of these latter days, and *wo to the commercial city that suffers these rivers to be diverted from it.*"

With the unrivaled Mississippi, stretching its arms almost to the extremities of a continent, and bearing to her lap the varied productions of a region of immense extent and unsurpassed fertility, New Orleans has hitherto folded her arms, and looked with a smile of indifference at the efforts of other less favored cities, to draw to themselves, by artificial means, some portion of the wealth of this great valley. She has said to herself, that there was enough for all, and, that whatever efforts art might make, the great highway of nature, the Mississippi, must bear to her the lion's share of the products of the West.

To a certain extent, this feeling is well founded, but it may be, and, indeed, has been, carried too far. Why should she permit herself to lose *any portion* of that commerce which she now enjoys, and which she may retain, by entering with spirit into the contest which the Atlantic cities are now waging against her.

"Railroads," says Mr. Bebb, "are to be the artificial rivers of these latter days, and *wo to that commercial city that suffers these rivers to be diverted from it.*"

Even the mighty Mississippi cannot prevent this *wo* from falling, to a certain extent, upon New Orleans, unless she too appropriates to herself these "artificial rivers."

New Orleans has greater natural advantages to make her a great commercial capital, than any city on the globe. Situated on the outlet to the sea of an inland navigation of 20,000 miles, whose freights are the products of a region larger than most European kingdoms, and unequalled in productiveness. Such advantages should make New Orleans the greatest city on the globe. Yet, in face of these facts, New

Orleans has been outstripped in growth, by cities possessing, comparatively, insignificant commercial advantages.

This has been in part, owing, no doubt, to the undesirableness of New Orleans as a place of residence, its alleged unhealthfulness, and the expensiveness of living. These causes have prevented a large portion of her commercial population from becoming permanent residents, and have almost banished the mechanical or manufacturing portion, which forms so large an element in the population of northern cities.

These unfavorable causes have been gradually diminishing, but they still have, and probably will ever have, an important effect in restraining the population of New Orleans. But there are other and more powerful causes which are but just commencing to operate to draw away the commerce which naturally belongs to this city, and these are found in the artificial routes—canals and railroads—established by the Atlantic cities, to draw to them the products of the West.

New York, by the Erie canal, has succeeded in obtaining almost the whole commerce of the lakes, and by the different routes now open, connecting the Ohio and Mississippi with them, draws to her much of the commerce of the West, lying between the lakes and these rivers. By means of railroads, constructed, or now under construction, she has opened a rapid communication with all portions of this great region.

Philadelphia and Baltimore have both their canals and railroads completed, or nearly completed, to the Ohio, by which they will soon be in communication with the western rivers, and with the great system of railroads which will soon connect Cincinnati, St. Louis, Louisville, Nashville, and all the commercial centers of the great West.

Norfolk, by the James river and Kanawha canal—by the projected Virginia and Tennessee railroad—will be in commercial connection with the Ohio, with the Tennessee and Mississippi rivers.

Governor Floyd, in his recent annual message to the legislature of Virginia,\* urges that her canals and railroads will, when completed, be the great routes of import and export from the western valley, possessing, on account of her milder climate, advantages during the winter season over more northern routes; and over New Orleans, owing, as he says, to the unhealthfulness of that city, and to the deterioration which many articles of commerce, particularly provisions, experience in their transit through it.

Georgia has extended her magnificent system of railroads to the Tennessee valley, and will, ere long, by the same means, reach both the Ohio and the Mississippi. By these routes, a large portion of the commerce of the rich valley of the Tennessee, must, as will be shown hereafter, be diverted from New Orleans to Savannah or Charleston.

Mobile has projected and commenced her railroad to the Ohio; the report of this road, published in the October, November and December numbers of your Review, will show your readers to what extent, and with what reason, she calculates that this road will draw to her the commerce and travel, now directed to New Orleans.

Of the various roads and canals indicated above, some of them, as

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\* See Commercial Review, March, 1850.

those from New York and Philadelphia, have been recently completed, so far as to open communication with the Ohio valley—others have been long in construction, and will be, ere long, completed; as the Chesapeake and Ohio Canal, Baltimore and Ohio Railroad, James River and Kanawha Canal, and the Georgia Railroad to the Tennessee, while others, as the Virginia and Tennessee, the Mobile and Ohio Railroads, are recently projected and commenced, with almost the sole object of diverting to them the commerce of rich and extensive regions, now tributary to New Orleans.

These routes, converging from various points on the Atlantic to the central region of the West, are giving rise to another great system of railroad routes, by which all the great centers of trade of the valley, St. Louis, Cincinnati, Louisville, Nashville, Memphis, &c., will be connected with them and with each other.

Does it behoove New Orleans alone, of all the commercial cities in the United States, to stand idle and see her very life's blood—her commerce—drawn from her by the efforts of her sister cities? cities which, beyond good harbors and good climates, have few commercial advantages, save what, by vigorous efforts, they acquire through works of art.

New Orleans, with unrivaled commercial advantages, has, as I have before hinted, her own peculiar disadvantages as a commercial city, and, unless she uses some efforts to overcome the latter, her very advantages will ultimately become neutralized. I have alluded to her mere local disadvantages; but there are other than those.

It is very common to say, in reply to all statements of loss which will ensue to New Orleans by the artificial routes in construction by other cities:

"We have the Mississippi flowing by our wharves with a navigation of 20,000 miles, and penetrating, by its navigable arms, every State of the great West—no railroad or canal route which other cities can construct, can compare with what nature has given us."

It is unquestionably true that New Orleans has, in the navigation of the Mississippi and tributaries, extraordinary natural advantages; but it is not true that these natural advantages will forever render it unnecessary or unimportant to secure to herself, likewise, the advantages of art. The "artificial rivers" of Governor Bebb are, in numerous instances, rivaling nature's own rivers, as channels of commerce.

The main advantage of river navigation, as compared with railroads, is for transportation of heavy freights; but this is not all that is requisite for a commercial city. To retain the commerce of certain portions against the rivalry of railroads and canals, we should have the means of receiving freights more cheaply at *all seasons*. From a large portion of the river valleys just enumerated, communication with New Orleans is cut off during a considerable portion of the year, by want of water in the rivers, or ice.

Another most important requisite to the commercial capital of any great district of country, is, that means of rapid and convenient communication for passengers, mails and light freights, should exist. Other things being equal, the inhabitants of any country will naturally send their produce to, and receive their supplies from, that point to



which they can most readily resort themselves, with which they can communicate by letter and receive an answer in a few days.

Here New Orleans is greatly deficient; with unrivaled facilities for receiving heavy freights from almost every point of the great valley, she has been, and is particularly since the introduction of railroads, strongly deficient in means of prompt communication with large portions of the valley.

An inhabitant of middle or eastern Tennessee, of Kentucky, of nearly all Ohio, Indiana and Illinois, cannot reach New Orleans in less than ten days—and for large portions of the year, is interdicted entirely from all personal communication; and it is well known the mails are even less rapid in their motions, than passengers.

Time is the great item with commercial men, and when a merchant of the West can go to New York or Philadelphia—sell his produce and make his purchases and be at home again in a week, he will not think of spending a month or six weeks in going to New Orleans. These facts have been fully felt and acted upon at the North. New York had hardly completed her Erie Canal before a railroad was laid along side of it, and now, the navigation of the lakes not satisfying the undeniable demand for economy of time, railroad routes are rapidly being extended, parallel to the lakes and rivers, which will soon connect New York with Cincinnati, Louisville and St. Louis.

Here is the want of New Orleans; an inhabitant of certain districts, as the Tennessee valley for instance, cannot only send his produce cheaper to Savannah, or Mobile, or Norfolk, by the railroad routes now in contemplation, but he is himself brought within a day or two of these cities, and this means of communication is equally open to him at all seasons of the year.

A great net work of railroad is growing up, binding all the middle, northern and western States, in which New Orleans is not included—to which they are as if they were not, or rather worse than if they were not—for, without conferring any benefit on her, they are drawing away her commerce.

But the very existence of this great net-work of railroads, while it imposes upon New Orleans the necessity of connecting herself, in the same way, with the important points of the West, facilitates the means of doing so.

To have a railroad route to Louisville or Cincinnati, it is not necessary actually to build a railroad to either of these cities. A single stem, of moderate length, will connect with roads in construction, which will carry us to those cities; and this same stem will put us, in a few years, in railroad communication, not only with the West, but with all the Atlantic cities; in other words, one single road, leading from New Orleans to Nashville, or some point in that vicinity, will connect with roads to Memphis, St. Louis, Louisville, Cincinnati, to New York, Philadelphia, Baltimore, Washington, Norfolk, Charleston and Savannah.

Can a stronger inducement be offered to, can a stronger necessity be imposed upon, any commercial city to construct a railroad, than is offered to, and imposed upon, New Orleans.

The length of railroad requisite to reach the Tennessee river, is about 375 miles, to reach Nashville, about 480. Construct this length of

road, and, by the time it is completed, New Orleans will be, by means of other roads now under construction, or which will surely be constructed in the period of a few years, in railroad communication with almost every—perhaps I may say without qualification—with *every* commercial city of the United States, both of the western valley and the Atlantic sea-board.

Leave it unconstructed, and New Orleans will stand alone, *out* of the great network of railroads, binding together the cities of the West to those of the East. She will still be, by tedious and difficult routes, ten days from New York, and, at certain seasons, almost cut off from communication with her own valley—it being often a matter of difficulty to reach even Louisville and St. Louis—while these and other western cities are brought within one or two days of New York. The effect on the relation of New Orleans to other points of the Union, will be as if an earthquake had severed the continent and removed New Orleans to a four or five times greater distance than before. It may be urged, that the construction of this great system of railroads, to which I have alluded, will render certain, sooner or later, a connection with New Orleans, whether or not her citizens now make any effort about the matter. Such *may* be the case, but, in this great struggle for the trade of the West, New Orleans must not let herself be anticipated. Channels of trade once broken, are not easily restored. Let portions of the western valley be brought, by railroads, within two days of the Atlantic cities, while they remain still ten days from New Orleans—let this continue for a few years, and to these portions of the valley New Orleans will be forgotten.

But, I contend, that New Orleans can easily maintain her commercial supremacy of the western valley, against the rivalry of the Atlantic cities, by a little timely effort.

Whatever be the importance and advantages of railroads, they cannot yet contend with navigable rivers, for the transportation of heavy freights, distances being the same, or even when very considerably less.

The products of the western valley, the great staples, are all heavy: Cotton, sugar, tobacco, hemp, pork, corn, flour—these are the great staples of the West, and, indeed, the great staples of the commerce of the world; and all these bulky articles, now reduced, by competition, to the very minimum values for which they can be produced, are compelled to seek the cheapest route to market. New Orleans, by the unrivaled system of river navigation of the Mississippi and tributaries, possesses the means of bringing these staples to her, from a large portion of the valley, cheaper probably than they can be carried, by railroad, to the nearest Atlantic city. But there are seasons, when these rivers are sealed to commerce; during which an inhabitant of the upper valley can neither send nor receive a bale of merchandise to or from New Orleans, or communicate, personally, with our city. During all this time, however, the railroad communication is maintained with the Atlantic, and, in that direction, all commerce or travel must take its way.

It should also be borne in mind, that most of the return freights or staples of the western country, are less bulky and more valuable, and can pay a higher toll, consisting, as they do, principally of manufac-

tured goods, from the North and from Europe, or, the produce of the East and West Indies. Such articles can afford to pay a high freight, and, by the advantages which railroads give, for the transport of these supplies and for passengers, the advantages which New Orleans enjoys, of cheap freight by the navigable rivers, will be, in a measure, neutralized.

Let New Orleans, therefore, have her railroad, *as well* as her river communication with the West, and she will possess all that is requisite to maintain the commerce of the West. She will possess advantages which no Atlantic city can rival.

Perhaps I cannot better illustrate the importance of railroad communication to New Orleans, than by calling your attention to a particular portion of the great valley—the first region which would be struck by the road I am recommending—the valley of the Tennessee. This fine valley, characterized, by Governor Floyd, in his message to the Virginia legislature, as “one of the most magnificent of all those washed by the waters of the West, the annual commerce of which is worth \$35,000,000,” has been, thus far, from the peculiarity of its situation, almost exclusively a commercial tributary of New Orleans. The Atlantic States which have, for years past, been gradually extending their railroad and canal routes toward the more northern portions of the Mississippi valley, are now struggling for the commerce of this rich and, until recently, to them inaccessible region. Georgia has already reached the Tennessee river, at Chattanooga, by her railroad; and Virginia, by her projected “Virginia and Tennessee railroad” (a work which, Governor Floyd asserts, will be prosecuted with energy and despatch), intended to connect the James river and Mississippi, at Memphis, is another rival for the commerce of this region; let us calculate with what chances of success.

Savannah, the nearest Atlantic city, will be, by her railroad, about 500 miles from the central portion of the Tennessee valley. By the Tennessee and Mississippi rivers, New Orleans is about 1,500 miles, more than three times as far. But, during a considerable portion of the year, the navigation of most of the Tennessee river is closed, by scarcity of water. During this period, not only can no freight be sent to, or received from, New Orleans, but an inhabitant is absolutely interdicted from visiting this city, without undertaking a journey almost as tedious as traversing the continent; while, at the same time, he may reach Savannah in twenty-four or thirty-six hours, and receive from there all his supplies, or send thither his cotton or tobacco.

Under such a state of things, the commerce of the Tennessee must, in a great measure, at last leave New Orleans, and go to the Atlantic, as a little calculation will prove.

The present rate of freight from the Tennessee, below the shoals, to New Orleans, are:

For Cotton,.....	\$1 25 @	\$1 50	per bale.
“ Tobacco,.....	4 00 “	5 00	“ hhd.
“ Corn,.....		10	“ bush.
“ Iron,.....		6 00	“ ton.

From above the shoals, the freights are much higher.

At 1½ cents per ton per mile, all these articles can be delivered in

Savannah, at about the same rates, while, for the extensive and wealthy region above the shoals, the freights, by railroad to the latter city, are scarcely more than half as much as to New Orleans.

But New Orleans is actually nearer the Tennessee river than Savannah, by land; and a railroad is only necessary, to give her every advantage which Savannah has, for quick communication and return freights, while she maintains her supremacy in other respects.

Will New Orleans suffer this \$35,000,000 of commerce to go to Savannah, or Norfolk, as it must do; or, will she make an exertion, by establishing a railroad route, to maintain it?

The same road which she must construct to the Tennessee, to save the commerce of that river, will connect her, by branches which will, as it were, spontaneously spring from it, with Natchez, Vicksburgh and Memphis; and, by roads which the eastern, northern and western States are now constructing, with every commercial point in the Union.

*New Orleans*, April 1, 1850.

J. G. BARNARD,

Brevet Major U. S. Corps of Eng'rs.

#### ART. IV.—THE MANUFACTURE OF TURPENTINE IN THE SOUTH.

PRODUCTION OF TURPENTINE IN SOUTH CAROLINA; EXPORTS IN PAST YEARS; RESOURCES FOR MANUFACTURING; VALUE OF LANDS; PROCESS OF EXTRACTION; FACILITIES OF TRANSPORTATION; DISTILLATION; ESTIMATE OF PROFITS, Etc.

As the manufacture of turpentine in this State has excited some interest within a year or two past among our agriculturists, and many of them are beginning to devote their attention to it, it has occurred to me that a brief notice of its history and progress might not be uninteresting to those of your readers who contemplate embarking in the business.

Several communications on the subject have appeared in the papers of this State and Georgia, from the various details of which I have condensed a summary of information concerning the process of manufacturing and probable profits. A collection of old documents before me relating to the early history of the State, furnishes a few items of value, by means of which I am enabled to give you the exports of the article in past years. Personal observation, and the results of experiments communicated by a number of friends largely engaged in the enterprise, have given ample evidence of the facilities afforded by many sections of the State for abundant crops, quick transportation to a good market, and the prospect of a fair reward to the industry and skill of the manufacturer. On this latter point there are some trifling discrepancies in the reports from different sections, which must necessarily be the case, as no exact standard of profit can be laid down for the whole State, but must depend upon various circumstances of locality, quality of lands, capital and labor invested, and the amount of practical knowledge, experience, energy and economy, brought to bear upon the successful execution of the work.

EXPORTS IN PAST YEARS.—From statistics before us, we derive the



information, that the attention of our predecessors was turned to this commodity as an article of export, nearly two hundred years ago, although even to the present day, so far as our own State is concerned, there is but little practical knowledge afloat on the subject of its production and manufacture. Our North Carolina brethren have long since made it their great staple, and it is not unworthy of our own consideration, whether it might not be rendered, with us, a valuable adjunct to our overstocked gin houses and granaries.

A "Compleat Description of Carolina and the Natural Excellencies Thereof," published in London in 1682, thus enlightens us as to the amount of exports of tar :

"Tarr, made of the resinous Juice of the Pine (which boyl'd to a thicker Consistence is Pitch) they make great quantities yearly, transporting several Tuns to Barbadoes, Jamaica, and Caribbe Islands."

Governor Archdale's account of the Province (1707) mentions the arrival in England of "17 ships from Charles Town Laden with Rice, Skins, Pitch and Tar." In another account "drawn up at Charles Town in September 1731," the trade of Carolina is represented as being "so considerable that of late Years there has sail'd from thence Annually above 200 Ships, with Merchandizes of the Growth of the Country, besides 3 Ships of War. It appears by the Custom House Entries from March 1730 to March 1731 that there sailed within that time from Charles Town 207 Ships most of them for England, which carried among other Goods, 10,754 Barrels of Pitch, 2063 of Tar, and 1159 of Turpentine."

In one of these pamphlets I find the following

"Account of several species and quantities of Commodities of the Produce of South Carolina which were exported from thence at the Port of Charles Town, in one year from first November 1747 to 1st November 1748, together with the rate and amount of the value of each in Sterling money and South Carolina Currency."

Species.	Quantities.	RATES OF VALUE IN		AM'T OF VALUE IN	
		Sterling.	S. Car. Currency.	S. Car. Curcy.	
		£ s d	£ s d	£ s d	
Turpentine,.....	2,397 bbls.	0 7 1	2 10 00 per bbl.	5-992	10 00
Rosin,.....	97 "	0 7 1	2 10 00 "	242	10 00
Pitch,.....	5,521 "	0 6 5	2 5 00 "	12,422	5 00
Tar common,.....	2,784 "	0 5 00	1 15 00 "	4,872	00 00
do green,.....	291 "	0 7 1	2 10 00 "	727	10 00
Oil of turpentine,.....	7 "	2 2 10	15 00 00 "	105	00 00
do do	9 jars.	1 8 6	10 00 00 per jar.	90	00 00

RESOURCES FOR MANUFACTURING.—Travelers through the middle and lower districts of the State, agree in pronouncing the pine forests of these sections as well adapted as those of North Carolina for the manufacture of turpentine. One writer calls the attention of the owners of large bodies of pine land, heretofore regarded as but of little value, to the fact that "the day may be near at hand when they will find themselves the owners of mines more sure, if not quite so profitable, as those of California." In the districts of Orangeburg and Colleton especially may be found lands, the value of which for the profitable making of turpentine has been tested for several years. Throughout those of Horry, Darlington and Marion, the trees are of excellent quality, and this section is destined to be the seat of very extensive operations in the business. The route contemplated for the Wilmington and Manchester railroad runs through the center of it; and in anticipation of the success of this enterprise, lands which once brought no more than ten to twenty cents per acre, have risen to \$1 and \$1.50. In North Carolina, it is estimated that about 800,000 barrels of turpentine are annually manufactured—value to the makers from \$1,700,000 to \$2,000,000

**VALUE OF LANDS.**—Good lands can now be had in the lower parts of Barnwell, Colleton and Charleston districts, at 50 cents to \$2 per acre. Near the village of Summerville, 22 miles from Charleston, they have been purchased within the past year at 75 and \$1, and in one or two instances, as low as 50 cents. In the vicinity of Orangeburg, the range is from \$1.50 to \$5. Many of the neighboring planters have embarked in the business, and at present it is difficult to obtain suitable locations.

**FACILITIES OF TRANSPORTATION.**—The section of country embraced within the districts of Colleton, Charleston, Barnwell, Orangeburgh, Sumpter, Georgetown, Horry and Williamsburg, is considered the cream of the turpentine region of this State. The South Carolina railroad passes directly through the center, from one end to the other of each of the first four names, and opens, through a portion of the fifth, communication with the western boundaries of the other districts. The Edisto river runs through the same districts within a few miles of the railroad, crossing it near Branchville, and extending in the immediate vicinity on the other side for the distance of one to eight or ten miles. In the parishes of St. Stephens and St. Johns Berkley, the Santee river and canal, and Cooper, Wando and Ashley rivers, afford easy access. Further north, the Congaree, Pedee, Wateree, and Lynches creek, furnish steam and poleboat communication with the city, and the completion of the railroad from Wilmington will still further extend these facilities.

**PROCESS OF EXTRACTION AND PREPARATION.**—The pitch-pine yields five different substances, which are included in the gum or resin, and obtained thence by extraction and subsequent distillation. Turpentine is the gum in the liquid state, drawn from the tree while growing, by incision and the heat of the sun. Oil of turpentine is extracted from turpentine by distillation, and the portion which then remains is resin. After the trees have been cut down, split up and dried, the application of fire heat produces tar, the solid part of which is separated from the liquid by boiling, and becomes pitch. Turpentine is obtained from boxes cut in the standing green trees, about a foot from the ground, into which the sap descends through slight incisions made into the tree, immediately above, with an instrument especially constructed for this purpose. The process of boxing, chipping and preparing barrels for shipment, is thus described by an old hand at the business:

**"METHOD TO BE OBSERVED IN MAKING TURPENTINE.**—Box the tree after the sap is gone down and stop before it rises; therefore it will require more hands to box than it will to work the trees. A good hand will cut from 50 to 60 quart boxes a day; some expert axmen in practice, may cut 100, but it is very seldom such hands are to be found. Care should be taken to cut the box on the straight side of the tree. Some trees will contain from 1 to 4 boxes, owing to the size of it. Care should be taken to leave from 4 to 6 inches of sap and bark between faces, so as to preserve the life of the tree. Cut the box from 4 to 4½ inches deep, about 8 inches wide. Go down the stump of the tree so as to cut the heart as little as possible. Clean out the chips and bark from the boxes that your turpentine may be free of them. The next work, after the box is cut, is to gauge or corner, by a few chops, commencing in the edge of the box, running up the tree widening it at the same time, so as to make a channel for the turpentine to run into the boxes. If the face is nearly a foot wide, say from ten to eleven inches, then your boxes, or at least a part of them, will fill quickly, and you should have your barrels ready so as to dip as fast as the boxes fill. The next work, after the cornering is done, is to be done with a hatchet made for the pur-

pose; then comes the round shave, you chip two or three times with a hatchet, keeping the face smooth, then begin with the round shave. Never go into the tree more than  $2\frac{1}{2}$  or 3 grains of the wood, and that should be repeated every eight or nine days, never going up the tree more than one eighth of an inch at a chipping, that is with the round shave, the only object is to keep the old cut fresh, you may go over every seven days as many persons do. A hand can chip over his task in five days, some will in less time. Twenty-five hundred is a task for a good hand, then he has two days to dip; if his trees run well and are thick, he can dip three barrels a day, if not, from two to two and a half. The timber for barrels should be got in the winter, staves 32 inches long, the heading wide, so as to make, when round,  $17\frac{1}{2}$  inches across; a common cooper will make from four to six good barrels a day. An average crop to the hand is 200 barrels per year, which varies in prices from \$2.50 to \$4 per barrel as prices current will show."

Another writer describes the method of preparation still more fully, as follows:

"A good crop season, with occasional showers, is about the most favorable season for the running of the trees. The trees should be boxed at least 18 inches from the ground, so as not to be overrun by heavy rains, and for greater convenience in dipping also. The boxes, moreover, should be cut when the form of the tree will permit, on the north side of the tree. They are not so much exposed then to the action of the sun. The turpentine when running to the box, protected in this way, will retain more of the spirits. Besides the advantage of saving more spirits from evaporation, by having the boxes on the north side of the tree, you have the boxes protected from the dust and leaves that fly about with the south winds, which prevail most constantly during the summer. When the boxes are cut they should be well cleansed of the chips; and in chipping the tree afterward, care should always be taken to keep the chips of wood and bark from falling into the boxes. It is important in boxing the trees to see that the hands perform their task properly, and not allow them to mislead you, as they will frequently do, by saying that they perform their task, without half doing so. Neglecting this particular, you may suppose, when the running season comes, that you are making a bad crop without knowing the true cause of short yield—that your trees are not half boxed. The experiment, I learn, has been made successfully in chipping over the same spot twice. The object of doing this is to have the running exposed on less of the face of the tree, and to make the trees produce for a greater number of years before the chipping gets so high as to be very inconveniently managed. As the chipping goes on from year to year, you have a longer face of the tree for the turpentine to pass over before it reaches the box. The value of the turpentine then is very much diminished and you have to gather it from the face of the tree for scrape, which is worth but about one-half as much as what is dipped from the boxes.

"To guard the trees from the worm and from fire, rake away the leaves and chips every season. The turpentine should be gathered clean as possible from the boxes, and put up in neat barrels of uniform size and about the standard weight, which at present is 320 pounds gross weight. In dipping turpentine, the virgin or yield of the first year should not be mixed with the dippings from trees of older running. It should be carefully barreled by itself, and sent to market quickly. This quality of turpentine, most valuable just after it is gathered, diminishes in value when kept, by the rapid loss of the spirits. It is not unusual in North Carolina to continue to chip trees until you run them up from 12 to 15 feet high. Any good axman that can cut twice in one place, can be learned in a week to cut 50 boxes per day, and soon up to 75, and soon learn to chip well. The most important part of the labor is to have the trees properly boxed and chipped, so as to insure you constant gain. Green hands to commence cutting boxes, say the 1st of November, would cut by the middle of February from five to six thousand boxes, which are about as many as they could tend well the first year. From the number of trees that would run well and work steadily, the hand will make the number of barrels of turpentine herein stated. There are many hands in North Carolina who tend 7,500 to 9,000 boxes for their tasks, making 300 barrels and upward of turpentine; but they are the brag hands of the country.

"Ordinary hands will chip from 8 to 10 hundred boxes per day, and when

getting out the turpentine dip 3 bbls. per day; while tip top hands will chip from 12 to 15 hundred per day, and dip from 4 to 6 bbls. of turpentine, where their trees stand thick and their boxes are well filled.

"After tending your trees six or eight years from your first boxing according to the procedure in Carolina, you back box the same trees, leaving some 2 inches of the sap on each side of the tree, between the old and the new box, thereby preserving the life of the tree. Then, after tending these boxes as many years as the first, you can cut the faces out 10 or 12 feet high by the axman having a bench to stand on, which afford an immense quantity of the richest kind of wood, such as tar is run from in North Carolina."

**DISTILLATION.**—The cost of distilling is very great, and it is a business requiring no small capital and energy. In North Carolina, there are in operation about 150 stills, which, at an average cost of about \$1,500, with fixtures, demand an expenditure of \$225,000. There are but two that I know of in this State—one near Orangeburg village, owned by Captain V. D. V. Jamison, a worthy and enterprising resident of that place, and another in this city, established several years since by Messrs. B. F. Smith & Co., which I took occasion to notice in a previous article on the public improvements of Charleston. These gentlemen are very extensively engaged in the distillation of turpentine, prepared to purchase it in any quantity, and to furnish all the tools necessary for carrying on the manufacture of it, of the best quality, and on liberal terms. They have purchased most of the crop raised in the lower and middle districts, and have every facility for insuring prompt sales and returns.

**ESTIMATE OF PROFITS.**—From a pamphlet recently published in this city, on the production of turpentine, I extract the following calculation, showing the probable profits of making the article, in estimating the yield per hand at 200 barrels:

Average price of dip turpentine, \$2 50; scrape, \$1 25.	
150 barrels dipping at \$2 50,.....	\$375 00
50 " scrape at \$1 25,.....	62 50=
Deduct expenses for making 200 barrels, at 30 cts.,...	60 00
Conveyance to market, @ 25,.....	50 00
Commissions, &c.,.....	27 50=
	137 50
Making clear to the hand,.....	\$300 00

The average yield here assumed appears very large. We find this estimate, however, amply supported by other published reports and observations, derived from the best authorities. One of these is from an experienced North Carolina manufacturer, who spent several months in an examination of the pine lands of South Carolina and Georgia. He gives, as his opinion, that no region of the world offers greater inducements to embark in the business, than the pine lands of these two States. The trees, in many sections, are so numerous as to be almost inexhaustible, and the yield, both in respect to quantity and quality, equal to any he had ever found in the best regions of North Carolina. The location of these lands, in the immediate vicinity of railroads, navigable streams and sea-port markets, offers the best facilities of transportation and ready sales. An average crop to the hand he estimates at 200 barrels per annum, prices varying from \$2 50 to \$4,\* and expresses his conviction,

\* I quote literally, but this is too wide a range—\$3 being the ultimatum.



that three to four hundred dollars can be made clear to every hand employed.

A gentleman engaged in the business near Ridgeville, thirty-one miles from Charleston, informs me, that with forty hands, he succeeded the last year in making one hundred and twenty-five barrels to the hand, or 5,000 barrels,

Which, at a little less than \$2 per barrel, as a fair average for the	
crop, is equal to about.....	\$9,000
The expenses deducted, say.....	6,000

Leaves a net profit of.....	\$3,000
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A writer, in a late number of the Charleston Mercury, gives a statement, showing the results of the experiment, made by one of the most respectable and enterprising citizens of Barnwell district. He does not indorse to the full many of the calculations which have appeared, which he considers as extravagant and over-wrought. The main object of the communication would seem to be, to prevent the indulgence of too sanguine expectations, on the part of those entering into the business, and not to depreciate the value of a judicious investment of capital and labor, in its prosecution. It is written in a candid spirit, by one who has been an eye-witness, and enjoyed ample opportunities of information. The conclusion at which he arrives, is, that the business may be rendered a profitable one to those who happen to be favorably located, with regard to facilities of transportation, set but little value on their fine timber, and are tired of making cotton at the low prices, to which planters have been hitherto compelled to submit. With skillful management, and the assistance of a person brought up to the business regularly, he clearly shows that the turpentine manufacturer may reasonably calculate on a fair remuneration for his outlay and services. This result may not be realized where the inconvenience of conveying the produce to market by wagons, hauling from a great distance to the railroad, or floating down a small stream, subjects the manufacturer to heavy expense and delay. The danger to be apprehended from fire, probable injury to the fertility of the land by the extraction of turpentine from the trees, checking of the growth of the timber and exhaustion of soil, are all matters of interest to be taken into the account. With these comparative estimates of profit and loss as a basis, the writer proceeds to detail the plan pursued by the manufacturer above alluded to, who has gone into the operation, under the best possible auspices.

"The boxing of the trees," he informs us, "was commenced in January, and, though this was a late beginning, he made up for it in the number of hands employed. For having only seven tasks to cut, he had engaged in the work about twenty-five hands. The chipping required the work of seven hands throughout the whole season, and the dipping three. The coopering required two hands, besides the extra labor of getting the staves and hoop poles. The whole operation required the undivided attention of from twelve to fifteen hands, from the time of furnishing the boxes until the season closed. He had in his employment a genuine North Carolina dipper, a man raised to that business, and no other. He was active, industrious and skillful, and the hands did all the work that could reasonably be expected or desired."

He then proceeds to state the crop made:

"As the season has scarcely quite closed, it is not practicable to state the precise number of barrels made, but it is quite certain that the whole crop will not

exceed one thousand barrels. A very small portion which has been sold, brought two dollars and three-quarters per barrel. But putting the price at what has been invariably considered a fair average, passing by the circumstance that, after the first year, a large proportion of the crop is scrape, for which only half price is obtained, and twenty-five hundred dollars will be the gross amount received for the year's yield. Take off twenty-five cents for railroad transportation, and we have \$2,250. From this is to be deducted expenses of storage, drayage and commissions in Charleston."

The inference from this calculation, is, that as much as two hundred dollars to the hand will not be realized, which may freely be admitted, without making it out to be a very bad business. There are few cotton planters who can show as clean a balance sheet, for some years past, in the history of their operations. In drawing his comparison between the results above exhibited and the profits of the cotton planter, the value assigned to the crop of the latter can hardly be admitted as a fair average.

"But I am far from admitting that it is as good as cotton at nine cents. Of course, the profits of the cotton planter vary with the quality of his soil, but there is a material circumstance, apt to be overlooked in such calculations, as this: The cotton planter may not sell two hundred dollars worth of cotton to the hand, but he invariably makes, besides his cotton, a provision crop to support his hands, horses, cattle, hogs and his family. Let him sell his cattle, his hogs, his carriage horses, his saddle horse; let him put away his servants, and board out, and employ his whole force in making cotton, without a grain of provisions of any kind, sowed or planted, to attract his attention and energy from the one object, and who will say that he cannot make as much as \$200 to the hand and even more than that, at the present prices of cotton?"

Here we have both sides of the picture fairly presented, from which the candid inquirer can draw his own inferences, weighing all circumstances, and making all due allowances.

Thus I have endeavored to collect for the information of such of your readers as may feel interested in the subject, a few crude materials, from which they may extract something that may be of use to them. The results given are not, it is true, derived from practical knowledge, but they may be relied on in the main as substantially correct. I have, however, taken considerable pains in prosecuting the inquiry, for the benefit of friends about to enter upon the experiment, obtaining facts from diligent personal observation and indisputable authority, and arranging them into a form which may serve for references, and prevent many useful hints which have been given out, either in print or in conversation, from being lost or forgotten. Such as they are, you are welcome to them, and if they can benefit any one of your subscribers, the time and space consumed will not have been misapplied.

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## DEPARTMENT OF DOMESTIC MANUFACTURES.

### 1. THE VALLEY OF THE MISSISSIPPI A GREAT FIELD FOR HOME MANUFACTURES.

[The following is, we believe, from the pen of Hamilton Smith, Esq., of Kentucky, and appeared in the columns of the Louisville Journal.—Ed.]

We propose to show, by well known facts, that the people of the central and northern sections of the Mississippi valley require no crutches of government manufacture while combining their great staples at home.

In adjusting general laws, bearing on our manufacturing interests, the people

of the West have really had but little weight. They have had but slight knowledge on the subject, and their representatives have been content to study general principles, and rely, for details, on parties who were looking mainly to the wants of districts elsewhere. Our scattered manufacturers have been satisfied with their profits, and occupied in extending their business, instead of gathering statistics for the use of their members of Congress; and, generally, we have supported or opposed the policy of "protection," as we have happened to think of its influences on the prices of our agricultural produce.

We have had no very important manufacturing interest of *our own* to foster, and, although we have preferred the prosperity of New to that of old England, we have not, as a people, very clearly seen the exact money advantage of shipping corn and cotton to Boston instead of Liverpool.

In our discussions and legislation on our manufacturing interest, we have generally taken it for granted that at least a revenue tariff was absolutely required, to sustain the western mill-owner; consequently, the impression has everywhere obtained, that manufactures, on a large scale (and it mattered not at what position in our valley), must be unsafe depositories of capital, until the general policy of government could be fully ascertained and continuous protection relied on.

This opinion, almost universal here and abroad, must be wholly changed, before we can make rapid progress in the establishment of manufactures.

The foreign artisan will not leave a country where he does not require protection, for one where protection is required; he will not abandon certainty for uncertainty. And our own capitalists will not embark in a business, which, as they daily hear from the East, is subject to constant fluctuations and losses, until they are satisfied that they can place themselves on safer ground.

With the suggestion, that there may be some "method" in the complainings of our rich eastern brethren; that they may have had no desire to foster competition in a country where there are greater elements of manufacturing success than in their own; we proceed to show, that, in the home combination of food, iron, cotton, hemp, wood and wool, and in sections where the other element, power, can be obtained cheap, the western manufacturer is independent of foreign competition. We refer chiefly to coarse fabrics, and shall state the relative advantages of the counties of Lancaster, Staffordshire, and the West Riding in England, and of the counties of Perry and Greene, Ind., and Daviess, Crittenden and Caldwell, Ky.

We have to examine the relative cost of food, labor, power, materials and transportation.

It is difficult to classify the various items of subsistence, and to show the relative cost of living in the respective districts. A man can exist on a penny a day in London, and perhaps in the cellar of the very house where parlor boarders pay a guinea for every dinner. Equivalent quantities and qualities must only be regarded, and, without quoting largely from prices current, it is fair to fix on wheat, which is grown in perfection here and there, as the standard. Of this, our rate would not average 70 cents per bushel, while the English rate would average over \$1 20 per bushel. The relative rents or value of equivalent land, free from taxation, and near markets equivalent in extent, would be ten or twenty to one in our favor.

Mr. Carey, in his work on political economy, gives ample proof that our labor, measured by its efficiency, is the cheapest, and the following question, which we make from page 229 of 2d volume of Mills's Political Economy (the most recent English work on that science), will save us the trouble of making further comparison on this point:

In America, wages are much higher than in England, if we mean, by wages, the daily earnings of the laborer; but the productive power of American labor is so great—its efficiency, combined with the favorable circumstances in which it is exerted, makes it worth so much to the purchaser, that *the cost of labor is lower in America than in England.*

POWER.—In the strata of our central coal basin, which average about four feet in thickness, a good miner will dig and wheel, to the mouth of the drift, from 70 to 110 bushels of lump coal in ten hours; as the labor in these strata is healthy, safe and not irksome, it is well paid, compared with our present prices of agricultural labor, at \$1 25 per day; eighty bushels should cost say one and a half cents per bushel, besides rent, which, on the most favorable sites, is not over one cent per bushel; add one-half cent, for profit to the contractor,

and we have the cost of our best lump coals, at three cents per bushel, at the furnace door of the mill or furnace, and directly on navigable streams, canals or railroads, by which these strata are cut.

These coals are, according to the report of Prof. Johnson, equal in evaporative power to the best English coals, the average cost of which, at the pit's mouth, is not less than ten cents per bushel. The average price of lump coals at Newcastle, and for the last forty years, has been 12s. 1d. per ton, or a fraction over ten cents per bushel. The prices of the best coals at Liverpool have averaged \$3 67 per ton, or say thirteen cents per bushel.

It will be borne in mind, that the prices of coals in England have reached their lowest points; here the tendency of prices at the mines is downward.

Here there is a most important element (one which has made England what she is) at less than one-third its cost in the country from which, as is supposed, we require protection.

**Corros.**—From the central cotton fields of the southwest, cotton can be laid down at the factories built and to be built up on the banks of the Ohio, in Daviess and Perry counties, as cheap as at New Orleans. The cost and charges of removing cotton from New Orleans to Manchester is not less, on the average, than one and a half cents per pound. Here we have an advantage of say twenty per cent., in obtaining the chief material of cloth.

As to this, our great staple—a staple in which we virtually have the monopoly—it is the height of absurdity to suppose that its manufacturers, 5,000 miles distant, can compete with us, even if we had no other advantage than the saving in transportation.

**IRON.**—We can find no tables of the actual cost of iron in England, and the prices are so fluctuating as to be an unsafe criterion. About 1835, the cost at Merthyr Tydvil, in South Wales, is stated to have been £3 0s. 5d., and at Glasgow, £2 17s. 9d. per ton for hot blast cast-iron. This cost has been reduced by the introduction of new and improved processes, which we have been slow in adopting, in consequence of the high cost of machinery and fixtures. A complete set of three furnaces costing, in England, about \$100,000.

The clay iron stone of the coal measures is the chief ore smelted in England; and perhaps the position most favorable for this manufacture in that kingdom, is in the south of Staffordshire, where are associated the pit coal and iron ore, the limestone for flues and the fire-clay and fire-stone for construction of the furnaces. The crude iron-stone there rarely yields over its 30 parts in the 100 of ore. It is drawn up with the coal some hundreds of yards from the surface, and, notwithstanding the low prices of labor and capital, costs an average of 12 shillings a ton. The best quality of "*gubbin*," runs up to 16 and 17 shillings. At 24 cents the shilling, the average stated is \$2 88 per ton. The cost of limestone is about \$1 44 per ton, and of coals, equivalent to ours, certainly over seven cents a bushel, or \$1 96 per ton.

By the best processes that we have seen described for making hot blast iron, we may set down three tons of coals and one ton of limestone for the ton of iron, and thus obtain the cost of the crude materials combined in that ton:

Iron stone, three tons, at \$2 88,	\$ 8 64
Coals, three tons, at \$1 96,	5 88
Limestone, one ton,	1 96
	<hr/> \$ 16 48

From the imperfect data before us, we think that the cost of conversion, including labor, interest on capital, &c., &c., must be at least \$3 32 per ton; making the whole cost \$20 per ton.

At the best iron works in New England, and with ore of about the same yield, this cost of conversion is not far from \$5 50 per ton.

The price of Scotch pig iron in New York is now quoted at \$18 per ton, duty paid; but we are not advised of the losses or profits of the producer, or the quality of the article; and we cannot ascertain the cost of the crude materials.

In our western counties enumerated, we have iron-stone of greater purity (ours averaging from 30 to 60 per cent.), pit-coal, fire-stone, fire-clay, and limestone of as good quality. At our high prices of labor, and with our imperfect machinery and lack of system, in the very infancy of the manufacture here, our crude materials will average about thus:



Three tons of ore, at \$1.....	\$ 3 00
Three tons of coal, at \$1.....	3 00
One ton of limestone, at 75 cents.....	75
	<hr/>
	\$ 6 75

against the Staffordshire cost of \$16 68.

If charcoal is used, at a cost of three cents per bushel, and allowing 200 bushels to the ton of iron, we increase the cost of materials to \$9 75 per ton, and we get a much better article.

At the furnaces erected on the banks of the Cumberland and close by uncovered beds of rich iron-stone, the cost of the ore is said to be less than 75 cents per ton.

In the estimate of cost here, we put the *minimum* rates at the most favorable positions. It is more important to show what can be than what is done.

If iron can be made cheaper about Bloomfield and Eddyville, than about Hanging Rock and Greensburg, the iron-masters should move toward Bloomfield and Eddyville.

The cost of moving a ton of pig-iron from Staffordshire (the heart of England) to the central cities of this valley, even if taken as ballast from Liverpool or Bristol to New Orleans, cannot be less than \$8 per ton—making the whole cost here \$20 per ton, *without any duty*. Now, unless we have been grievously hoaxed in answer to our inquiries, pig-iron of greater value is now made on the Cumberland, the White and the Merrimack (Mo.) rivers, at less than \$15 per ton, if not at less than \$12 per ton, and, at these positions, there are all the materials sufficiently abundant for the making of iron for a thousand years, and for the use of the world.

Practically, we know nothing of the making of iron; and the facts before us are too few and uncertain for us to write with entire confidence; we have, however, gathered these with some care, and, if they are erroneous we shall be glad to receive the correction. Our chief object is to get at the truth, and not to build up a theory or strengthen a party; and to get at these and such relative facts, we have before suggested the importance of a bureau of statistics.

Such of our readers as wish to learn more of the details of the cost and making of iron, are referred to the works of Dr. Ure, R. C. Taylor, and the able paper of Mr. Hodge, published in the Railroad Journal.

Wool.—The grades of wool are so various, that the relative cost of equivalent kinds, in England and on the Ohio, cannot be given (at least by us) with accuracy; yet we know very well that we have every variety of climate, soil and food, for sheep husbandry, and either on the sides of the Appalachian mountains or on the central prairies, we can produce every kind of sheep and wool of any fineness. We know that it must cost less to produce wool on our cheap lands, than on the costly and highly taxed lands of England and Belgium; and, if we should have to obtain full supply from the mountains of Spain or the pampas of South America, the average distance is not against us, and the natural attractions are greatest to our cheaper food and fuel.

Wood.—Here, of course, there can be no question of our advantages. From the building of a ship to the making of a cradle, we have the material at our doors, while England has to obtain her chief supply from the heart of Europe or this side of the rapids of the St. Lawrence.

Indeed, in the enumeration of the entire list of heavy and bulky raw material which a manufacturing people require, we can think of scarcely one in which we have not, or cannot easily have, a most decided advantage over England and every other country where are equal facilities of communication and interchange, and where the charter of the people, the laws and the climate, are equally favorable to manufacturing pursuits.

Such are the general facts, and we could here rest our argument. But, as it is always easy to answer general statements by statements equally general, and, as the mass of readers will not take the trouble to analyze either, we will again recur to the cotton manufacture, which is, directly or indirectly, the chief source of employment to the manufacturing world.

For the correctness of our details, we refer to a pamphlet recently published by General C. T. James, of Rhodé Island, whose statements on this subject will not be questioned, and whose able letter ought to be studied by every western and southern statesman and capitalist.

A cotton-mill of 10,000 spindles and corresponding machinery, for making coarse brown cottons, will require a fixed and working capital of less than \$300,000; will operate with 43 men and 229 women and children; will require say 50,000 bushels of coal, and work up 1,800,000 pounds of cotton yearly.

This cotton can be laid down at the mouth of the Tradewater, at Bon Harbor or at Cannelton, as cheap as at New Orleans.

The freight, insurance, interest *in transitu*, wastage, commission, &c., from the New Orleans levee and through the cotton press to Manchester, Glasgow, Lisle or Bruges, will average over  $1\frac{1}{2}$  cents per pound.

Our mill saves this, or.....	\$27,000
Difference in coal in our favor over 4 cts. per bushel, .....	2,000
Difference in starch, oil, wood, &c., &c., over .....	1,000
	<hr/> \$30,000

England has no advantages over us, in making those coarse fabrics, save in the abundance and low rate of her capital, and this is nearly or quite neutralized by her distance from the raw material and the necessary use of a greater capital in its conversion either in the hands of the ship-owner, factor, or manufacturer.

But, for the argument, we will suppose that the Englishman only requires \$300,000 for the mill; that he is satisfied with 4 per cent. dividends, and we require 8 per cent. In this item, then, he has the yearly advantage of \$12,000.

There is abundant evidence to show that the New England mills can make a pound of course cottons cheaper than their Manchester competitors; and there is abundant evidence that we can make up the same quantity cheaper than the New Englander—yet, as this question of wages is a stumbling block to our people who have not examined the subject, we will show the doubters the weakness of their doubts by supposing that our Ohio river mill will pay Lowell wages, and that the English mill owner can get his work done at half our prices. However, when we are clothing the English army in India, and against a differential duty of 15 per cent., this supposition would readily seem absurd.

Well, at the Lowell rates, the yearly cost of the 45 men, at 80 cents per day, is, for

300 days.....	\$10,820
And of the 229 women and children, at \$2 per week, for 52 weeks, is.....	23,816
Or, total.....	<hr/> \$34,136
One half of this is .....	\$17,068
To which add the supposed difference against us in the use of capital, or.....	\$12,000
And we have.....	<hr/> \$29,068

as the sum of the advantages of the English manufacturers, and less than the sum of our known and certain and *unchangeable* advantages of \$932 per annum; and this, not for our home market, but for markets equally near to both. For our home markets, we have the further advantage of the cost of bringing four and a half millions yards of cotton, or over \$45,000 per annum.

By the time that we have supplied our home market with the course cotton fabrics, we shall have the skill, machinery and capital, to produce these at a lower relative cost, and to compete with foreign manufacturers in the finer fabrics of cotton.

It remains only to inquire what markets for cotton goods are as dear to us as to England, and we give below three tables.

1. Where we have the advantage in distance and in commercial relations.
2. Where England has the advantage, and
3. Where both countries are about on an equality.

The nearest approximation we can get of the values of these markets, is by annexing to each the amount of calicoes exported to each, in 1846, by Great Britain.

As soon as we have begun to convert our Kentucky and Indiana food, hemp, timber and iron, into ships, we shall make outward freights cheaper than any other nation; and when we have connected the Gulf of Mexico and the "Father of Waters" with the Pacific ocean by canals and railroads, we shall then, in nearness to the cotton goods markets of the world, have the advantage over England of at least 4,000 miles. The elements of our manufacturing greatness are now just beginning to be developed and appreciated, and what we now regard as

novel and paradoxical propositions, will soon appear but self-evident axioms. We conclude by repeating, and in terms as emphatic as we can use, that, *in the fabrication into course forms of our great staples, the Western manufacturer needs no protection—not even the protection of a revenue tariff.*

The only class of our Western people that should earnestly ask for a high tariff, is the agriculturist. It is *his* interest to obtain, by legislation and by every other honest method, a speedy diversity of pursuits and the withdrawal of the superabundant labor in the fields to the workshops; thus to lessen the rapidly increasing surplus of his own bulky and perishable products, which will not bear distant transportation, and thus to increase the number of consumers who *must* look to him for supplies.

When it is borne in mind that the ratio of increase of the surplus of our great staples is very far beyond the ratio of increase of the foreign demand for them—when it is noticed that the export of provisions from this valley has increased fifty per cent. in the last year—when it is observed that a single county of Michigan is now shipping more wheat through the New York canal, than was borne on that canal twenty years ago—when the wonderful fertility of our soil and the extent of our arable lands is regarded, it cannot be doubted that the supply of the products of our land will fall immeasurably short of the foreign demand. Fall of prices will be the necessary consequence unless we obtain the home market, and, to obtain this, the agriculturist will be (and rightly) the strongest advocates of the national policy which brings the consumer to the side of the producer.

We know that this is the true view of this subject, and, as it is one not generally taken by our people, and as the facts have a most important bearing on our industrial pursuits as well as on our general and State legislation, we have given it and them more than usual space in our columns. We ask our readers (who have the facilities) to advise us of any errors we have made in the details and to furnish us with additional facts. Our object is to get at the truth and the whole truth. As we receive, so will we deliver it, whatever theory it may sustain or controvert.

Table No. 1.

British North America.....	11,834,914
Foreign West Indies.....	21,302,767
British West Indies.....	17,758,418
Colombia.....	1,676,115
Mexico.....	6,290,600
U. S. of America.....	13,556,509

Prussia.....	478
Portugal, Madeira, &c.....	11,583,602
Russia.....	207,739
Sweden and Norway.....	451,826
Spain.....	32,902
Sardinia, Tuscany, &c.....	11,694,746
Trieste, Austrian Ports, &c.....	2,242,174
Turkey and Levant.....	21,190,476

72,419,323

Table No. 2.

Belgium.....	677,976
Denmark.....	449,836
Egypt.....	486,031
France.....	1,533,934
Gibraltar.....	5,212,231
Hans Towns.....	25,481,739
Hanover.....	38,439
Holland.....	11,896,057
Malta and Ionian Isles.....	1,992,838
Naples and Sicily.....	9,008,906

Table No. 3.

Brazils.....	40,563,344
Buenos Ayres, Montevideo, &c.....	1,140,936
Coast of Africa.....	5,682,956
Chili and Peru.....	17,138,571
Cape of Good Hope.....	2,666,781
India.....	16,456,528
China.....	2,038,017
Mauritius and Batavia.....	1,107,286

87,394,650

## 2. MANUFACTURING IN MEMPHIS.

Steadily, earnestly and zealously, for years past, we have been endeavoring to impress the importance of manufacturing upon our fellow-citizens. We have assumed the ground, and maintained it by such facts and deductions as defy contradiction or cavil, that Memphis was one of the best, if not the very best, manufacturing point in the Union. We have contrasted its capabilities with those of Lowell, and other extensive manufacturing points of the North, and already demonstrated the advantages to be greatly in favor of Memphis. A highly intelligent and practical gentleman, recently instituted a comparison between the two points, and gave Memphis the advantage, in the manufacture of cotton, of 42 per cent. He estimated the cost of transporting the raw material from Memphis to Lowell, and its return in the manufactured shape, as well as the interest upon the capital thus invested while in transitu, and arrived at the above

result. From our own observation, aided by the knowledge and experience of intelligent and practical merchants and factors, we have every reason to believe that he was not far from the mark, and at the average rate of the raw material, the difference in favor of Memphis would be at least 42 per cent. The Lowell manufacturer expects to make, and probably does make, a profit of eighteen per cent. upon the manufactured fabric, with which he is satisfied—indeed grows rich. Add 18 per cent. to the 42, and the manufacturer at Memphis would make a profit of 60 per cent. Here are facts from which there is no escaping, and which appear, at last, to have aroused the attention of some of our citizens.

A joint stock company, with a capital of \$300,000, are erecting a cotton mill on Wolf river, a short distance above bayou Gayoso. The building is one hundred and twenty feet long, and thirty feet wide. It is three stories high: first story, twelve feet clear of girder; second story, eleven feet clear of girder; and third story, ten feet clear of ceiling. Engine building, twenty by eighty feet—roof of slate. They will start with 2,000 spindles, with all the subsidiary machinery calculated for lower numbers of yarns, and 24 4-4 looms. The building will contain nearly three times the quantity of machinery, above sated, and it is intended to fill it, by adding to from time to time. They expect to have it in operation by the first of September next, at furthest.

We are also gratified to observe the erection of a very extensive flouring merchant mill, on Front row, below the navy yard. This is four stories high. Of the other dimensions of the building we have no information, but it is very large and capable of containing a large quantity of machinery. There are, also, two iron foundries in the course of erection, in our city, and which will be in operation in a very short time, when Memphis will offer greater facilities for boat-building and repairing, than any other point in the South-west; but this subject has been somewhat elaborately treated by us recently. We congratulate those feeling an interest in Memphis, upon the introduction of manufactures, which cannot fail to promote its rapid growth and prosperity; and we most heartily wish all those embarked in them, all the success their enterprise so richly merits. With extensive manufacturing establishments, and a railroad to Charleston, a few years will see a population upon the bluff, of 100,000 souls. This road can be built, and it must be built—all our citizens have to do, is to will it, and the work is done, and we will stand upon an equal footing with sister states. If they should not will it, they will obtain such a start of us as will require many years of toil and exertion to overtake them in the race of prosperity. We are as well prepared for the construction of this road now, as we will be at any time in the future—a consideration which ought to stimulate to immediate action, those who are duly impressed with the value and importance of the enterprise.

### 3. COTTON AND COTTON MANUFACTURES AT THE SOUTH.—PART 4.\*

COMPARATIVE COST AND PRODUCTIVENESS OF COTTON, AND THE COST AND PRODUCTIVENESS OF ITS MANUFACTURE: BY CHARLES T. JAMES.

Would the northern climate admit of the culture of cotton, and had a Yankee, in either of the New England states, a cotton plantation, with all the requisites for the prosecution of the business, the moment he found he could make more money by the manufacture of that article, than by its production, it would be farewell to cotton growing; and the next thing you would hear on his premises, in the way of business, would be the clatter of the loom and the hum of the spindle. Yankee folks are said to be full of notions; and such notions constitute the great secret of their prosperity. If southern planters would act on a similar principle, they would much benefit themselves. A gentleman well versed in the statistics of cotton growing, in the finest cotton regions of the South-west, has calculated that, to supply cotton for a mill of 10,000 spindles, say 1,800,000 pounds per annum, would require the product of ten of the best plantations in the country, which, with their slaves and fixtures, would be worth \$738,000. The product, as above, would amount to \$108,000; from which, deduct the cost of operating, such as overseers, materials, carriages, &c., which he estimates at \$28,000, and you leave to the planters \$80,000. The mill to manufacture this cotton will cost, with all its machinery complete, \$210,000, and

\* Continued from March number.



require a working capital of \$40,000—or, say the entire capital, including mill and machinery, would, at the outside, be \$250,000.

To manufacture the above amount of cotton into sheetings of one yard in width, of the fineness of No. 14, will cost, including the cost of the cotton, steam-power, transportation, insurance, labor, and in fact, every item of expense, a little short of \$232,000; to which add \$15,000, the interest of the capital, at six per cent. per annum, and you have the entire cost of manufacturing the above 1,800,000 pounds of cotton. This cotton will make 4,500,000 yards of cloth; which, at  $7\frac{1}{2}$  cents per yard (a low price, by the way), will be worth \$337,500, leaving a balance, after having paid every expense, of about \$106,000. Thus, you see, by the labor of 275 operatives, mostly women, girls and boys, there will be created, actual wealth to the amount of \$106,000, from 1,800,000 pounds of cotton, besides the amount paid to them for labor. To produce that same cotton, worth in market \$108,000, required the labor of no less than 600 able bodied hands, besides one-half that number of horses and mules. The capital employed to produce this result, is \$738,000. The manufacturer's capital is but \$250,000. If, therefore, the planter could by any means remove these plantations into one of the New England States, with all their slaves, fixtures, &c., and they should continue to produce cotton as abundantly as on the Mississippi or Tombigbee, though now nominally worth toward a million of dollars, the owner of the cotton mill which cost but \$250,000 would not exchange it for them, and would evidently be a loser by the bargain if he should. This will at once appear obvious, when we state that, over and above the cost of working the plantations, already named, there would be expended, for overseers, &c., \$20,000 more; and reducing the net income to \$88,000—less, by \$18,000, than the net product of the cotton mill. Under these circumstances, the mill owner would much rather keep his mill, and employ his hired operatives, than to take in exchange the plantations with their slaves, &c. The reason: he can make the most money by his mill. But this comparison applies not only to a cotton mill in Massachusetts, New Hampshire, Rhode Island or Connecticut, but even in the best cotton growing State, at the side of the best cotton plantation in that State. This statement requires no labored argument to confirm it. Every species of property designed for the creation of wealth, is valuable in the ratio of its productiveness, without respect to its actual cost. One plantation may have cost \$50,000, and require an outlay of \$20,000 per annum to work it. Another may have cost \$20,000, and be worked at an expense of only \$5,000. Without respect to this difference of cost and expenditure, every one knows that, if the cheaper establishment yield a greater profit than the other, it is, of course, of most value to its possessor. Thus, if a planter own cotton lands which cost, with all his slaves and fixtures, \$700,000, or more, and yield a net profit of \$80,000 per annum, the cotton mill at his side, the capital of which is but \$250,000, including the cost of the establishment itself, which yields a net profit of \$100,000, is intrinsically worth more to its possessor, than the planter's cotton lands and slaves. Every planter knows this common-place statement to be true. But, after having admitted all this, the cotton planters and capitalists of the South, raise the inquiry: Suppose we wished to go into the manufacturing business, though we have plenty of the raw material, how shall we obtain the labor and skill qualified for the work, and of both which we are deficient?

Up to the year 1767, not a pound of cotton had ever been spun in any part of the world, by machinery. Though a considerable quantity was manufactured in India, and some in England, yet all was done with the aid of the old spinning-wheel and hand-loom, precisely as is now the case with the families of our southern planters. When, therefore, Hargreaves in '67, and Arkwright in '69, brought out the spinning-jenny, only eighty years since, Great Britain possessed neither the requisite labor or skill, trained to the business, nor yet the practical cotton-machine builder, nor the raw material. All these were to be created and inducted into the business. But British enterprise did not falter. The business was taken in hand and prosecuted with vigor. In the course of four years, it was in successful operation. From that time to the present, Great Britain has lacked neither manufacturing labor, skill nor materials. The results of the business, at the present time, we have already seen. About sixty years since, not a solitary cotton spindle had been made or driven in America. It is doubtful if many persons had ever seen one. About that period, an attempt was made, on a small

scale, to spin cotton with machinery in Rhode Island, but failed for want of proper skill. This, however, was not long wanting. The arrival in this country of the celebrated manufacturer, SLATER, supplied the deficiency, and we have now only to look around, and to examine the statistics of trade in this country, to learn the great results of the truly wonder-working power of the cotton spindle and the loom. At the time the process of cotton spinning by machinery was first introduced into New England, the people might have laughed at the idea, and said, how shall we, entirely unaccustomed to building and operating cotton machinery, obtain the skill, and train the labor for the work? But others far-seeing and shrewd, came to the conclusion, and their conclusion was the correct one, applicable in all cases, that you have but to open a productive field, and there will be labor and skill enough found to cultivate it. The issue has proved the truth of the conviction. Those aids have never been required, but they have been at hand. And should the number of mills in the United States be doubled within twelve months, probably not one of them would have to delay, for a day, the commencement of manufacturing operations, in consequence of a deficiency of labor and skill. A vast proportion, if not all required, would undoubtedly be found among us. If not, the first demand would call from Great Britain as many of her now half-starved and starving operatives, as might be required. But, without calling for aid from Europe, a full supply may at all times be obtained in New England, to manage and supervise the operations of the cotton mill, and there are thousands of persons at the South, who would gladly and gratefully accept such employment to earn a livelihood, much superior to that which their present means can possibly afford; and would quickly become qualified for the work of operatives, under the charge and direction of good superintendents and managers. There is nothing hypothetical in this statement. Experience has shown it to be true to the letter.

As respects all raw materials, especially those of a bulky character, economy dictates that, all other things being equal, they should be wrought on the spot on which they are produced, in order to make the most valuable return. For instance—iron ore, a material abundant in Russia and Sweden. Were that material to be shipped to this country in its crude state, there would be a heavy charge for the transportation of the foreign matter combined with the metal, which must eventually be borne by the original owner. And all that the iron would bring in this market, after having been smelted and manufactured into bars, over and above the cost of the ore, would be so much wealth created here. The extra charge for freight is saved, and the additional value of the iron is retained at home, by its being manufactured on the spot on which the ore is found. Of this, the original owner takes his share, and the balance is distributed for labor, &c., in the community. That community is enriched by so much, therefore, in consequence of the operation. There may be some exceptions to this rule, but, from what we have seen, there is none in favor of the transportation of cotton to a distant market. The rule is founded on a general law. Labor and skill are marketable commodities. These, like all other commodities, will, as a general thing, seek the best market. Suppose all the labor and skill at hand are necessary to the production of a quantity of cotton, sufficient to supply the demand of the manufacturer—the planter then would manufacture his own produce, but lacks the mechanical skill. Let it be known that he is in want of an engineer, managers, overseers, operatives, machinists, carpenters, masons, &c., for the purpose, and you will soon see that, instead of finding it difficult to obtain such, he will, very probably, be overrun with applications. In a comparatively short period, hundreds of factories might be erected and started at the South, and fully supplied with every description of skill and labor wanted. Thousands would resort there with the hope of doing better by a change, induced by the prospects which new enterprises in a profitable business hold out, of permanent employment, with higher wages. Even should the planter, who goes into the manufacture of cotton, find it necessary to import his operatives from Europe at his own expense, he would still be a great gainer by the transaction. In a mill of ten thousand spindles, he would require two hundred and seventy-five persons. Suppose he should procure them in England, and pay the expense of transporting them thence to this country, at fifty dollars each—the transportation of the whole would amount to \$13,750. This would be once for all. Another such transaction would never be necessary. His mill will also re-

quire, as seen, 1,800,000 pounds of cotton. To place that cotton in a northern manufactory, will cost, including every charge, at least one cent per pound, or \$18,000. This amount all comes into the cost of manufacturing in the northern mill, and goes, of course, into the price of the manufactured article. This amount will, therefore, be saved by the southern planters who manufacture their own cotton. It pays, in one year, all the cost of transporting the above number of operatives, from England, and leaves a balance of \$4,250. But the operation of the transportation of cotton goes on from year to year, at the annual cost of \$18,000. We will now go somewhat more into detail on this subject.

The cotton from the planter, reaches the northern manufactory increased one cent per pound in its market value, by the expenses incurred in *transitu*. Allowing the planter's price to be six cents per pound, its cost to the manufacturer will be seven. The pound of cotton, less waste, will make two and eight-tenths yards of sheeting, No. 14, one yard in width, worth, at the present low prices,  $7\frac{1}{2}$  cents per yard, or 21 cents per pound. The raw material, however, is subjected to a loss of ten per cent. in the process of manufacturing, so that the weight of the manufactured article from 1,800,000 pounds of raw cotton, will turn off but about 1,600,000 pounds of cloth. Thus—1,800,000 pounds of cotton, at 7 cents, costs \$126,000. The entire cost of manufacturing, is \$121,000, including labor, and interest on the capital; and making with the cost of cotton, \$247,000. The quantity of the manufactured article will be 1,600,000 pounds at 21 cents per pound, or  $7\frac{1}{2}$  cents per yard. This is worth, at that rate, \$336,000. From this sum, deduct the cost, as above, and you leave as a balance in favor of the manufacturer, the sum of \$89,000. This is the gross income for one year; with the labor of 275 operatives, mostly boys and girls, and a capital of \$250,000. From the above amount of \$89,000 however, there are certain other expenses to be deducted, such as commissions, guarantees, &c., which will somewhat reduce it; but yet, the amount left will be much greater, taking all things into account, than the net proceeds to the planter from the raw material.

To produce the cotton for the foregoing operation, as already noticed, the planter employs 600 able-bodied hands, and nearly one-half that number of horses and mules, and a capital of at least \$730,000. The interest on this capital is \$43,800 per annum, or \$28,800 more than the interest on the manufacturing capital; and the labor is more than that employed in the manufactory, reckoning that of man and beast on the plantation, by three hundred per cent. Thus, the capital and labor necessary to the production of 1,800,000 pounds of cotton, would be sufficient to erect, furnish and operate three cotton mills, each of which would manufacture into cloth this entire quantity of cotton, and each of which would also return, in the shape of gross income, several thousand dollars more per annum, than is now realized from the entire amount of labor and capital employed to produce cotton for one of them! It must also be borne in mind, that the manufacturer at the north receives his cotton enhanced one cent per pound above the plantation price, which makes the gross amount of the additional cost, \$18,000 per annum. This would of course be saved by the manufacture of the article on the spot of its growth, and would go to increase the profits of the operation.

Were there room for a rational doubt on this subject, the reader might be justified in regarding it with some degree of skepticism. But, when he reflects on the well known fact, of the much more rapid increase of capital and wealth in the manufacturing community, than in that of the cotton planter, he will be constrained to acknowledge that the effect cannot be without a sufficient cause. That cause he will seek for in vain, unless he find it in the greater profits of manufacturing, compared with those of producing the raw material.

To confirm this statement, we annex a schedule, made up, not from estimates either hypothetical or theoretical, but from authentic data of actually practical results, drawn from a mill now in operation. These results have occurred during the past year, being one of the worst known in the manufacturing annals of the United States.

Cotton—1,800,000 pounds, at 7 cents, per pound,.....	\$126,000	Do. Repairs, wear and tear, machin- ists, &c.,.....	17,002
Cost of power ( <i>steam</i> ),.....	4,500	Do. General expenses, officers' sala- ries, transportation, &c.,.....	20,642
Do. Carding,.....	13,266	Do. Interest on capital of \$250,000,.....	15,000
Do. Spinning,.....	14,734		
Do. Dressing and Starch,.....	9,306		
Do. Weaving, including all expenses,.....	26,598	Total,.....	\$237,048



Against this sum, which includes the entire cost of manufacturing, we have  
 4,500,000 yards of No. 14 sheeting, the product of the mill, worth now  $7\frac{1}{4}$  cents  
 per yard,.....\$326,250  
 From this last amount, deduct the cost, as above,.....237,048

And you have a balance of.....\$89,202

As the gross profits to the Manufacturer, subject to the deductions for commissions, &c., before named, on 1,800,000 pounds of cotton, after having paid for the cotton, and the cost of manufacturing; while the planter who produced that cotton, receives but \$108,000; being more, by only \$18,888, than that received by the manufacturer. Yet, from that sum, viz.: \$108,000, the planter has to pay all the cost of production, together with all incidental expenses, besides the interest on his capital.

Facts like these should fix the attention of the cotton planter, teach him his true interest, and stimulate him to become the manufacturer of the product of his field, instead of permitting others to reap the entire profit. Yet, he acts differently. The small profits derived from his cotton fields, after the deduction from the gross receipts, of a sum sufficient to cover the cost and the incidental expenses, are generally appropriated to the extension of agricultural operations and the production of *more cotton*—of which there is already *too much*. He neglects the main chance, and delves on, from year to year, to build up European and New England manufacturing cities, towns and villages, and to enhance their wealth, when he might as well secure a due share of these benefits to himself.

#### 4. THE PRODUCTS OF COTTON.

To the editor of the Commercial Review :

The daily Delta of this city, February 2d, 1850, has the following :

"Commerce is fugitive and transient; its profits fly away; its objects pass through, often without leaving any addition to our wealth. But labor belongs to the soil; it is permanent among us; its effects are seen every where; it assembles in our midst large numbers, who, at the same time that they add to the wealth of the city, consume large quantities of the products of agriculture and commerce. Various industrial classes, trades and professions, are thus created, and general life and prosperity are diffused through the community. Thus great cities are produced; thus it is New York, Boston and Baltimore, are becoming so great; thus it is Cincinnati and St. Louis are advancing so rapidly ahead of New Orleans; thus it is that, while the exclusively commercial city of Bristol has been retrograding, Liverpool, which is both manufacturing and commercial, is becoming the greatest city in the world."

The writer commends the above paragraph as being most applicable to the condition of this city, and replete with sound practical sense and observation. The various branches of industry, susceptible of introduction and profitable prosecution, which have contributed so largely to the prosperity of the cities above named, should, most assuredly, meet, in New Orleans, with judicious encouragement. The writer furnished the following article, which appeared in the Commercial Bulletin, February 8th, 1850:

#### THE MANUFACTURE OF COTTON.

MESSES. EDITORS—This great branch of industry, having been rapidly extended in the southern States, has become a subject of much interest relative to its introduction in, or near, New Orleans. Several able articles promoting the inquiry have appeared in the *Bulletin*, and great credit is also deservedly due to *De Bow's Commercial Review* of the South and West, for its enlightened discussions and earnest appeals, on the importance, as well as practicability, of the measure. Appended is information in a shape which may further elucidate the subject, with the sources from whence derived, and with some deductions and inquiries drawn from it.

"In England, three-fourths of the spindles are moved by steam power, requiring  $11\frac{1}{2}$  horse power per 1,000 spindles and looms."—*De Bow's Review*, v. 4, p. 544, 545.

"A mill in Manchester contains, under a single roof, 75,000 spindles for making yarns—for fine yarns only—driven by an engine of 300 horse power."—*Dry Goods Reporter*, N. Y., Dec. 2, 1848.

"The English yearly exports of yarn for the average of years 1846 and '47, was 136,821,449 lbs., adding one-eighth for waste is 153,924,130 lbs., requiring, at 400 lbs. to the bale, the yearly average of 384,810 bales, all other exports of cotton goods requiring the average of 518,740 bales, so that the exports of yarns are about three-sevenths of the whole. The exports of yarns were, in 1846, principally to:

The Hanse Towns,.....	45 millions lbs. or 112,500 bales cotton
Holland,.....	24 " " 60,000 "
India,.....	20 " " 50,000 "
Russia,.....	15 " " 37,500 "
Turkey and the Levant,.....	10 " " 25,000 "



Naples and Sicily,.....	9 millions lbs. or 22,500 bales cotton.
Sardinia,.....	6 " " 15,000 "
Belgium,.....	5 " " 12,500 "
Trieste,.....	4 " " 10,000 "
Hanover,.....	3 " " 7,500 "
Sweden,.....	3 " " 7,500 "
	<hr/>
	144 361,000

[D. G. R., April 22, 1848]

The increase of mills we do not think are greater than the increased wants of consumers. New markets are opening for any surplus we have, by which producers are enabled to keep their prices steady, and we see sheetings from the Carolinas and Georgia competing successfully by the side of those from Lowell. We have long been of the opinion it was for the best interest of the slaveholding States to introduce factories, and employ the white population who will not work in the field, and in this way retain much of the wealth received from the products of the earth, that is left in the Eastern cities."—*D. G. R., July 15, 1848.*

"We see no reason why the East India market and a large portion of the North cannot be supplied with yarns spun at the South, and by diverting a portion of their labor to other channels, than the raising of this great staple, they will be enabled to enhance the value of the production."—*D. G. R., August 12, 1848.*

"Slave labor is said to be fifteen per cent. cheaper than white."—*D. G. R., Dec. 22, '48.*

"Throughout the South, the attention of all classes appears to be turned to the diversion of a portion of their labor from the raising of cotton to manufacturing. In Georgia, they reported to the last legislature thirty-two cotton factories, while in Virginia, North and South Carolina and Alabama, they are rapidly increasing; in Florida they have one cotton factory worked by slave labor—while the resources of the great valley of the Mississippi for manufacturing purposes, remain, as yet, wholly undeveloped."—*D. G. R., Feb. 10, 1849.*

"We are pleased to see such an interest awakened at the South and West, in regard to manufactures. From an inspection of the valley of the Mississippi last year, we became convinced that the day was not far distant when neither the Southern nor Western States would be dependent upon the East for the products of the loom. It is clear to our mind, that this portion of the United States is destined to be the battle ground on which the control of the non-producing markets of the world is to be decided. The inexhaustible beds of bituminous coal which run parallel with and contiguous to the great Father of Waters, will supply the *cheapest motive power in the world*, while they will have for a market, not only all the States that lie contiguous, but they are nearer to the markets of all Mexico. If the Atlantic and Pacific Railroad is ever made, it will debouche some where near New Orleans, and this region will in this matter again have the advantage of the rest of the world."—*D. G. R., Jan. 20, '49.*

Already yarn spun in the Southern States are vended in the Northern markets, and yarns produced near Pensacola, as well as New England, are sold in this city, New Orleans. Cannot yarns spun here, after supplying the home demand, be exported to the Hanse Towns, requiring in 1846 the product of 112,500 bales cotton from English spindles? to Holland, requiring the product of 60,000 bales? to the Mediterranean, requiring 72,500? to the Indian Ocean, 50,000, etc.? Why should we not compete with England in these markets, and send them our cottons direct, greatly enhanced in value, coming from our own spindles? To make yarns only, obviates the necessity of overcoming the difficult preparation of starching and drying for the loom, in a warm and humid climate like this, and requires many less in number of grown female operatives; that class only being fitted to weave the cloth and more difficult to obtain; while children from 12 to 16 are the operatives mostly wanted for the spinning department. The Bellevue Foundry Building, on the opposite side of the river, may be converted into an establishment for 30,000 spindles making yarns only, and the site is good, though perhaps a better one would be on the confines of the Second Municipality and Lafayette, or in the Third Municipality, where an abundant supply of German and Irish children may be obtained, who are now, as is supposed, unemployed, and who can come forth from their own domicils, precluding the necessity of building tenements expressly for their use.

To get up an establishment upon correct principles, every thing depends upon *starting right*, by obtaining exact and minute information of all the particulars connected with the subject, which are so essential to a thorough understanding of the matter. This can be done by actual and careful examination by a competent agent, deputed for the purpose, of those establishments now operating, with the latest and best improvements, in the course of which he could procure plans of buildings, exact drafts of spaces required for machinery, and make such correct estimates of the cost as would serve to govern the projectors of a cotton mill as to the amount of capital required for any designed number of spindles.

The cotton manufacture is now unquestionably depressed, because goods have not appreciated in proportion to the advance in the raw material. But then the present time is auspicious for taking the preliminary steps for a new mill. Machinery can no doubt be purchased or engaged at a cheaper rate, and a reaction is sure to come. If cotton maintains its present fair price, as it is hoped it will, the manufactured product must rise to the same level and restore the equilibrium, so that an establishment, commenced now, has every chance when finished to enter at once on a career of eminent success.

The writer, now resident in this city, having had some practical knowledge of the subject, was applied to by a friend in July last, for information as to the preliminary steps necessary to be taken, to introduce the manufacture of cotton in or near this city. The writer investigated the matter with what estimates and references he had at command, deriving therefrom the following results:

An establishment for 5,000 spindles and looms for making osnaburgs or sheetings will require a capital of about \$200,000, and will employ 150 to 180 operatives.

The same building and motive power, without looms, will contain and operate nearly double the number of spindles—say 10,000, for making yarns only, requiring about the same capital and the same number of hands, though partly of a different and younger class, no weavers being wanted.

A factory on a larger scale, say 15, 20, or 30,000 spindles, will require something less proportionate capital, will operate with greater steadiness, and can be conducted with less proportional expense.

The cost of construction and operation will vary materially, according to the style and permanence of the buildings, the finish of the machinery, and the *kind of goods* manufactured.

In the manufacture of seven-eights osnaburgs, weighing eight ounces to the yard, more goods can be made from the same number of spindles, looms &c., than to make No. 14 sheetings; coarse goods require a greater propelling power, and the machinery must be adapted to the purpose, by being made of greater strength; and machinery for coarse, compared with finer fabrics, will require some variations relatively, in the quantity of carding machines, spindles, looms &c.

See estimates, illustrations, &c., of the manufacture, DeBow's Commercial Review—

Vol. 3, pages,.....	136	188 to 205	Oct. and Nov. No.,...1848	page 370 to 372
Vol. 4, ".....	474	544 545	July ".....1849	" 51 52
February No., 1848, page	189		January ".....1850	" 71 73

In carrying on the manufacture in New Orleans, a very decided advantage will result from the great cotton market at its doors, affording facilities for making judicious purchases of the raw material, of procuring sample cottons at an under price, and also of obtaining damaged cotton at an under price, carrying it through the drying operations, as is practiced by the pickeries of this city, and working the different grades produced from it, for the various purposes to which they can be applied. In this connection, the inquiry may be worth consideration, whether it would not be well to adapt a mill to different grades of cotton, by having two or three sets of machinery, suited to different kinds of goods.

It is worthy of remark that, in July, 1849, osnaburgs of eight ounces to the yard ruled in this market at seven cents, or fourteen cents per pound, while yarns, No. five to ten, sold at the same rates per pound, fourteen cents. At this date, March, 1850, coarse yarns are eighteen cents, while osnaburgs are  $9\frac{1}{2}$ , or nineteen cents per lb. The cost of weaving the osnaburgs must be more than three cents per lb. A demand obtains throughout the interior for coarse yarns, used in family manufactures—and they may be diverted to other objects, such as ropes, cords, seine and wrapping twines, &c., and this brings up the question, whether, in a humid climate, which impedes the drying process of starch dressing for looms, it may not be expedient to make yarns only, with a portion, if not with the whole, of the works.

The vast quantities of yarns from English spindles, exported from thence to the continent and to India, are called mule and water twist, the numbers or fineness of the thread ranging from twenty to seventy, packed in bales of 300 and 400 pounds each. Vastly more of No. fourteen sheetings, thirty-six to thirty-seven inches wide, weighing  $2\frac{3}{4}$  to three yards to the pound, are consumed in the home market of the United States, than of any other description of brown goods, and of these goods we export large quantities, competing in them successfully with English looms. Osnaburgs of southern manufacture have taken the place of the Lowell's, so long favorably known and consumed by our planters; this is owing to the many new southern mills making these goods of a superior fabric, and it is questionable, whether the manufacture is not like to be overdone, and whether, therefore, it will not be preferable to adapt a new mill for yarns, or No. fourteen sheetings, or for goods of a still finer fabric. In yarns, the English exports have increased from 136,821,449 lbs., the average of years '46 and '47, to 154,428,040 lbs., for the twelve months from the 16th December, '48, to the 16th December, '49, as per DuFay & Co.'s trade report, Manchester, 1st January, 1850—requiring for the last period, at 400 lbs. each, an annual consumption of 434,328 bales of cotton.

To put in operation a manufactory of large extent will require the organization of a joint stock company—to carry it on successfully, it should be conduct-

ed, as far as adaptation can be made to this locality, on the plan of the best American or English establishments—to avoid rashness, and to act with due prudence and caution, *reliable estimates* must be obtained, in relation to the *cost*, comprized in the DEPARTMENTS OF FIXED AND WORKING CAPITAL, AND OF LABOR AND EXPENSES, as adapted to the manufacture of different kinds of cotton goods. Statistics should also be made up, showing the average price of cotton and of goods for a series of past years, from which, fair inferences may be drawn for the future. Such *reliable estimates* can only be obtained by rigid personal examination and scrutiny, of those establishments now working with the greatest success. In the course of such examinations, many particulars for investigation, before unthought of, will present themselves; all the estimates and information thus obtained should then be *verified* by comparing different establishments with each other—a careful record should be kept of the different examinations, that, by analyzing, correct results may be drawn from them. Exact drafts for the spaces required for the different machinery suited to make osnaburgs, sheetings or yarns, so as to adapt the buildings to the room required, must be procured; as also exact details of the number, ages and wages of the operatives, and all other expenses, incident, to the various classes of goods. *Taking the verified data thus obtained as a basis*, a company will be enabled to discriminate soundly, and to determine what *description of goods to make*; and, that important point settled can proceed in conformity therewith; and can, also, understanding the subject thoroughly, decide on the employment of such an *amount of capital*, adapted to a mill of whatever size they may wish to operate with, and the kind of goods to be manufactured, as shall, without any unnecessary overplus, *carry on the works vigorously* and without embarrassment.\*

To bring the subject to a practical bearing and commencement, the writer has the honor of suggesting to gentlemen interested in their own, and in the prosperity of the South, and this city, the following plan:

Let an association for a preliminary investigation be formed by opening a subscription. After procuring a sufficient sum to defray the proposed expense, let the subscribers, convened on notice over the signatures of either three of them, appoint from their number an executive committee, empowering them to appoint a temporary secretary, and a treasurer, to whom the subscriptions shall be payable on call; and also to appoint an agent, who, furnished with their instructions, and with funds for his time and expenses, shall be sent to obtain detailed, full and exact estimates and information of the subject matter; making it his duty to report on or before a time fixed in his instructions, through first executive committee, to the association, for their consideration and final action on the premises.

M.

## INTERNAL IMPROVEMENTS.

### 1. PLANK ROADS AT THE SOUTH.†

REPORT OF THE COMMITTEE OF FIFTEEN ON THE ESTABLISHMENT OF A PLANKROAD FROM TUSCALOOSA TO ROUF'S VALLEY.

**COST.**—The cost of such a road is made up of the several items. First, the right of way; second, the grading; third, the lumber for covering it; fourth, the laying of the timber and filling in of its ends; and fifth, the bridging.

1. *The right of way.*—For the better development of the coal field, as well as for reaching the iron beds at their nearest and richest points, the committee are unanimously of the opinion that the route of the plankroad, should follow the present Duke's Valley road, as near as the nature of the ground will allow. And they believe that it is the only route marked out by the geographical sys-

\* Adhering to the opinion before expressed, the present is a good time to commence the introduction of the cotton manufacture in New Orleans, or on the opposite side of the Mississippi.

† Continued from page 173 of February number.



tem of the intermediate country. If this be so; along this line, much of the land belongs to the government and is densely covered with a forest of the long-leaved pine. It is the opinion of the undersigned, that, upon application to Congress, through our State legislature, a grant will be made to the road of the vacant lands through which it may pass, for the purposes of original construction and subsequent repairs. They moreover believe that where the road may pass through private property, that the proprietors will be eager to draw it so near them, by granting a right of way free from all cost to the company. The country is so sparsely settled and the soil so extremely barren, and the proximity of the road of such immense benefit to such as may be so fortunate as to have it near them, that we feel ourselves fully warranted in leaving out of our estimate any cost for the right of way.

2. *The Grading*.—This consists in clearing off the ground; cutting down the hills and filling up the intermediate valleys so as to reduce the vertical inclination of the road to that limit which may be adopted as the maximum. Upon this maximum the utility of the road materially depends—being greater, as this maximum is smaller. Upon some of the plankroads in New York, a maximum as high as one foot in sixteen and a half is allowed. This is greater than that on the national turnpike, and seems to your committee much greater than should be adopted, where a less can be obtained without much increase of expense. A rise of one foot in sixteen and a half, is equal to 320 feet in the mile. Now, Prof. Tuomey reports, that from the city of Tuscaloosa to the head waters of the Hurricane, which is a point on the Duke's Valley, 18 or 20 miles distant from the city, the rise is about 300 feet. And although the intermediate country is broken, yet it would seem from this fact, altogether practicable to locate a road with a much lower maximum. From actual observation, the undersigned believe that the route is a favorable one for the location of a road with an elevation at the maximum of not more than one foot in thirty, or 176 feet in the mile. This is an elevation of about two degrees. And upon this assumption we will base our estimates of the cost and capacity of the road.

Prof. Gillespie, of New York, in a recent work entitled "A Manual of the Principles and Practice of Road-making," states the cost of both laying and grading a plankroad, sluices, bridges, etc., exclusive, at \$100 to \$320 per mile. Mr. E. P. Holcomb, of Georgia, who visited the North for the purpose of making observations upon plankroads, reports as follows: "The grading, &c., will of course depend entirely upon circumstances; but ought not to exceed \$400 or \$500 per mile." With these data before them, and with a personal knowledge of the route of the proposed road your committee have fixed upon the following amounts as adequate for the grading thereof:

From Snyder's to the fork of the road, four miles beyond Pitcher's, along all which part of the route the earth will be slight, \$250 per mile—9 miles. From Porter's on the Huntsville road, to Tuscaloosa—5 miles—\$300 per mile. For the rest of the distance, 18 miles, \$600 per mile.

For surveying, locating and superintending, the construction, \$100 per mile (Gillespie's estimate)—making the sum total for preparing the road, to receive the plank, \$585 per mile.

3. *Cost of Lumber*.—We have not estimated the cost of the timber standing, believing that the grant of the government and the liberality of the individuals who are to be chiefly benefited by this road, will relieve the company from all charges on this score. It is proposed to purchase a moveable steam saw-mill to cut the timber on the spot where it is to be used, and this may be done on all the route with the exception of two or three miles. The cost of the steam-mill will be about \$1,500, and supposing it to be worn out in the construction of the road, this would be a charge on the mile of \$50. For one mile of a single track, 8 feet wide and 3 inches thick,  $8 \times 3 \times 5280 = 126,720$  feet, board measure, are required. Two sills, 4 inches by 4 inches, would add

$$\frac{2 \times 4 \times 4 \times 5280}{12} = 14,075$$

feet, making in all, 140,795 feet. A single saw will cut 3,000 feet per day of such lumber as the road requires, or will cut the lumber for one mile of the road in forty-six days. To attend to the mill, there will be required two hands to fell the trees and to cut them into proper lengths, a wagon and team to haul them



to the mill, an average distance of one quarter of a mile, two hands to attend to the saw, and an engineer to attend to the machinery. Putting the wages of the engineer at \$2 per day, of the hands at \$1 per day each, of the wagon and team and its driver at \$3, we have a total of \$9 per day. Multiplying this by 46, the number of days to cut timber for one mile of the road, and adding in the \$50 per mile for the engine, we have the cost of timber per mile \$464.

4. *Laying the timber.*—By actual observation, Mr. Holcomb ascertained that six men laid, in the most approved manner, 110 yards per day. They laid, therefore, a mile in 16 days. The wages of these laborers for 16 days we put at \$96. If we estimate the filling in of the ends of the planks at half this sum \$48 (*Holcomb's estimate*), we have \$144 per mile for the cost of laying the timber and completing the road.

5. *Bridging.*—The only bridge of magnitude will be that over the Hurricane. Its length cannot exceed 300 feet, and, at \$3 a foot, its cost will be \$900, or \$30 per mile. On the rest of the route we think an average of 20 feet of bridging to the mile a very liberal allowance. The bridging of small branches may be safely put down at \$1 per foot. This will increase the cost to \$50 per mile. Let us now sum up all our estimates :

1. Right of way per mile.....	\$—
2. Grading, locating and superintendence.....	585 00
3. Lumber.....	464 00
4. Laying the same and filling in.....	144 00
5. Bridging.....	50 00

Total cost per mile, \$1,243 00

ITS DURABILITY.—On this point the undersigned are unable to report anything satisfactory to themselves. The duration of timber is affected by its quality, by climate, and by its position. Trees of the same species are not as durable in the South as in the North. The long-leaved pine of Alabama is not so durable as that of North Carolina. The plankroads of the North have been constructed of hemlock, the *abies canadensis*. The timber from this tree is only of secondary importance, and it is the least valuable of all the large resinous trees of North America. It was no doubt employed in the construction of plankroads in the State of New York, on account solely of its abundance and cheapness.

On the other hand, the long-leaved pine is the most valuable of the resin-bearing trees, on account of its compactness and durability. This is the species of pine found along the route of our contemplated road, and although our climate is unfavorable to the durability of timber, yet we think we may claim for our Southern pine a durability at least equal to that of the Northern hemlock. Roads of hemlock are estimated, by Prof. Gillespie, to last from 8 to 12 years ; and by Mr. Holcomb, 7 years : preferring the minimum estimate, we will say of ours, that it will last six years at least.

ITS CAPACITY TO EXPAND THE COAL AND IRON TRADE.—The capacity of the road to expand the coal and iron trade will depend entirely upon the reduction of the cost of transportation which it may be able to effect. To form a just estimate of this reduction, we must institute a comparison between the tractive force necessary to transport a ton of coal or iron along the present road, and that along the plankroad. The force of traction along any road depends upon two circumstances, viz.: First, *The slope or steepness of the road* ; and, secondly, *The nature of its surface*. When a weight is drawn up an inclined plane, the resistance of the force of gravity, or the weight to be overcome, bears the same proportion to the whole weight, that the height of the plane bears to its length. Thus, if a road rises one foot in ten, a horse drawing up it a load of one ton, is compelled to lift up one-tenth of the weight, that is, two hundred and twenty-four pounds. To this is to be added the force to overcome the friction of the load, and the sum is the entire expenditure of animal strength in transporting one ton up the whole ascent. The experiments of Gayffier and Parnell made with loads of 21 cwt. conform very closely to the results of theory. (*See the table in Gillespie on Roads.*) So that the resistance from gravity on a slope of 1 in 10, is to that on a slope of 1 in 30, as 1-10th of the whole load is to 1-30th of the same, or as 3 to 1. If then there were two roads of equally good surface, say plankroads, and if the maximum slope on the one were 1 in 10, and on the other 1 in 30, there would be three times expenditure on the former, of as much tractive force as would suffice for the latter.

Let us now consider the effect of surface. Poncelet in his treatise entitled "Mecanique Industrielle," p. 507, gives the following relations of the resistance from friction, for wheels rolling on different surfaces :

On a road of sand and gravel,.....	1-16th of the load.
On a broken stone road { in ordinary condition, .....	1-25th "
in perfect, " .....	1-67th "
On a pavement in order,.....	1-54th "
On undressed oak planks,.....	1-98th "

Assuming that the maximum slope on the Duke's Valley road is 1 in 10, which is not far from the truth, and that the resistance from friction is 1-16th of the load, the tractive force required for transporting a load along it, is for resistance of gravity 1-10th, for resistance of friction 1-16th, and for both

$$\frac{1}{10} + \frac{1}{16} = \frac{26}{160}$$

of the whole load. On a plankroad, the maximum slope of which is 1 in 30, and the resistance of friction 1-98th, the tractive force is

$$\frac{1}{30} + \frac{1}{98} = \frac{128}{2940}.$$

If the load is a ton of 2240 lbs., the tractive force on the common road is 364 lbs., while on the plankroad it is only 97 lbs. This makes one horse on the plankroad equal to three horses and three-fourths of a horse on the common road. But when we consider that the power of a horse to overcome a draught diminishes upon an ascent, in a greater ratio than that of a man, owing to its anatomical formation, being on a level equivalent to that of five men, and on a steep ascent to only that of three (*Lib. Useful Know.*), we may safely say that one horse on the plankroad will do the work of four on the present road. And it ought not to be left out of consideration, that this comparison is made in the summer condition of the road; and that during the most active season, the winter, the force of traction on the common road is greatly above the value assumed, while the seasons have no influence upon the plankroad.

Not taking into consideration the value of the vehicles, which would be much in favor of the plankroad, since fewer would perform the work, the plankroad would deliver coal and iron, at the head of steamboat navigation, at one-fourth of the present cost of transportation, were the road a free one. If this be so, its capacity to develop the coal and iron trade, will not be questioned by any one, provided what is saved in motive power is not entirely expended in tolls. And this brings us to the next branch of our subject.

THE PROFITS FROM THE ROAD.—Mr. Holcomb reports, that "a road from Rome to Oswego, that was so indifferently built as to require to be relaid after one year's use, paid, notwithstanding, thirty per cent. per annum. Indeed the profits of such roads were so great, that the Legislature of New York passed a general law restricting their income to ten per cent. When the income exceeds this, after setting aside a fund for repairs and renewals, the tolls are required to be reduced.

"The rates of toll on the New York roads are three-fourths of a cent per mile for a single horse and vehicle of any kind; one and a half cent for two horses and a vehicle, and half cent per mile for every additional horse. This would be three and a half cents per mile for a six horse team, an amount, apparently, which the coal or iron dealer, or the planter would very cheerfully and gladly pay for the facilities of a good road, where his wagons would neither upset nor stick in the mud, which is so frequently the case on many of our roads in the winter season. It would seldom, however, be necessary to drive more than four horses or mules to a wagon on a plankroad, in which event, the tolls at the New York rates would be two and a half cents per mile. On a plankroad four horses will carry the load of six, with more ease, and with one-half more speed; or suppose twenty miles to be the present rate per day for a loaded team, thirty could be as easily performed on a plankroad. Such at least, are the impressions I have received on looking into the subject."—*Holcomb's Letter to the Ga. Journal and Messenger.*

Holcomb's observations were made on roads graded to 1 in 16. We propose to grade ours to 1 in 30, on which one horse will draw as much as four on an ordinary road. The element of time we have left out of the account—because, as

a general principle, horses are more economically employed in carrying heavy loads at slow rates, than in carrying light loads at rapid rates, as both theory and experience prove. On a road graded as we propose, the tolls should be greater than those in New York, in the proportion of 3 to 8, in order to yield the same income; and yet, at the same time, to tax the wagoner no higher in proportion to the weight hauled. This would make 4 cents per mile for a two horse team, and one and a third cent per mile for every additional horse.

To ascertain the profits, we must then estimate the number of horses and vehicles that will probably pass along the road per annum. This result can be reached most readily by estimating the amount of traffic transported. At this time about 7,000 tons of coal are raised in the vicinity of Duke's Valley road. From the establishment of a plankroad, it is presumable that a tenfold increase in the number of tons will be realized in a very short period. Look back to the table showing the increase of the coal trade in the Schuylkill valley consequent upon improved facilities of getting the coal to market, and it will not be doubted that a tenfold ratio is a very moderate increase in the trade to be expected from the plankroad. Then 70,000 tons of coal will pass, on an average, 15 miles of the road, which is the same as 35,000 tons through its whole length of 30 miles.

Three years ago, Pennsylvania had 317 iron furnaces in blast. May we reasonably expect to have six tributary to this road? Already we hear of two in process of erection, under the present disabilities attending transportation. We think, therefore, that six is not too high an estimate. It is stated by the Board of Trade of Schuylkill county, that 42 furnaces turned out 122,720 tons of iron annually. This is, in round numbers, 3,000 tons per annum to each furnace. Six will turn out, then, 18,000 tons per annum, which will pass through the whole length of the road of 30 miles.

The quantity of lime sent to this market from the section of country to be penetrated by the proposed road, amounts at this time to near 300 tons. If this trade should realize a tenfold increase as is most probable, it would furnish 3,000 through tons per annum.

But besides these articles, there is every reason to believe that the planters and farmers of Roup's and Jones's valleys will avail themselves of the advantages of the plankroad for the transportation of the products of the soil.

We possess no data for making an estimate of the quantity of grain and flour that now finds a market or a place of shipment at the city of Tuscaloosa. We put it down at 30 tons, as certainly under the real amount. Should this trade be doubled only by the road, it will furnish 60 tons through.

The quantity of cotton received at the Tuscaloosa warehouse is about 6,000 bales per annum. Of this, probably 4,500 bales arrive in the direction of the proposed road, and would amount to 1,125 tons.

To bring these estimates together, we may then calculate on receiving from coal, 35,000 through tons; iron, 18,000; lime, 3,000; grain, 60; cotton, 1,125—total, 57,185 tons.

The force of traction necessary to transport this upon a plankroad graded to 1 foot in 30, is, as we have shown above 128-29;0ths, or 1-23d of the whole weight. This is 2,486.3 tons or 5,569,312 lbs. If the average power of a draught horse at 3 miles per hour for ten hours a day, be 100 lbs. (which is the general estimate), then 55,693 horses, working at 3 miles per hour, would be required to transport this amount of traffic. At this rate they would traverse the road in 10 hours or one working day, and the total amount of labor would be equal to 55,693 days' work of a single horse. If the number of horses to a vehicle, average four, the traffic would be equal to 13,923 wagons and teams passing once down the road. The toll at the New York rates would be on each wagon and team  $2\frac{1}{2}$  cents per mile, or 75 cents for the whole 30 miles. This would yield an income of \$10,442 25 per annum.

But we have charged tolls only on the descending and loaded wagons, and not on those returning. Your committee think that the tolls on returning wagons may be reduced to 1 cent per mile, per vehicle of 4 horses, which would amount to 30 cents the whole distance through. This would swell the income to \$14,619 15.

These tolls would be much lower than those of New York, because in the first place, no difference is made there in favor of empty wagons; and in the second place, on a road graded to 1 in 30, one horse does the work of four, while on the

New York road, four do the work of six. Yet the tolls in New York are paid cheerfully by the farmers, and the plankroad preferred, in point of economy, to the railroad, even where they have been laid side by side.

The cost of the plankroad for 30 miles, is in round numbers \$37,300, and the timber will decay (as we have supposed) in 6 years. So then the road must pay back these \$37,300 and 8 per cent. compound interest, in the space of six years. It must therefore pay \$8,069 per annum. But its income is shown to be, 14,619 15, thus leaving a balance in favor of the road, after paying back its cost, and 8 per cent., of \$6,550 15.

But, here again our estimate has been to the prejudice of the road, because we have supposed the whole of it to be destroyed by decay in six years: whereas the graded track will be uninjured, and in a state of readiness to receive a new covering of plank. The cost of timber is \$464 per mile. The cost of laying and filling in the ends of the plank \$144 per mile. The cost of bridging small branches \$20 per mile. Making the perishable expenditure \$628 per mile. For 30 miles this amounts to \$18,840. Then the inquiry is, what must be the annual income of the road to pay the interest on \$18,460, and to refund in six years the sum of \$18,840 at 8 per cent. compound interest. The interest on \$18,460 is \$1,476 80. The annuity which in 6 years will pay \$18,840, at compound interest, is \$4,074 30. Making the whole income of the road, in order to pay 8 per cent., \$5,551 10. But its income as estimated above is \$14,619 15; leaving a balance in favor of the road, over and above its cost and interest, of \$9,068 05.

And here it is interesting to inquire what capability will the road impart to the carriers of traffic on it, to pay tolls at the rates assumed above? This is easily estimated by calculating the annual saving of labor in the transportation of the traffic by the plankroad, as compared with the present road.

We have seen that the cost of transporting 57,185 tons of traffic on the plankroad is that of the labor of a single horse for 55,693 days. Rating the day's work of a horse at 50 cents, the cost of transportation amounts to \$27,846 50. Now what would the cost be on the present road? The resistance of gravity is 1-10th, and that of friction 1-16th, making together nearly 1-6th of the whole weight, or 9,531 tons, equal to 21,349,440 lbs.; which would require 213,494 horses working at 3 miles per hour. They would traverse the road of 30 miles in a working day, so that the total amount of labor would be equal to 213,494 days' work of a horse; which at 50 cents per day amounts to \$106,747. Subtracting from this sum, the cost of transportation on the plankroad, and we have the saving of labor in transportation \$78,900 50; out of which the carriers pay toll to an amount no greater than \$14,619 15. So that, if the conjectural amount of traffic did now pass on the present road, without any profit to the owners of it; the same would, on a plankroad, yield a profit of \$78,900 50—\$14,619 15, or \$64,281 35. This amount of traffic does not now pass to market, because the cost of transportation absorbs all the profits; but the large amount of profit which would be realized from the same; if transported on a plankroad, is the true measure of the capacity of the road to expand trade.

There is another point of view in which we desire to present the saving of labor in transportation upon a plankroad, compared with a common road. The present amount of coal raised in the vicinity of Duke's Valley road, is 7,000 tons per annum. This on 15 miles of the road is equal to 3,500 tons on 30 miles of the road. Of iron, say one ton is now brought to Tuscaloosa; of lime, 50 tons; of cotton, 1,125 tons; of grain and flour, 30 tons; making in all 4,706 tons per annum for 30 miles. This is the present development of the trade. Now the cost of transporting this on the existing road is equal to a draught of 784.33 tons, or 1,756,899 lbs., which is equal to 17,569 horses working 10 hours a day at a rate of 3 miles per hour. And as they will traverse the road in one day, the cost is equal to 17,569 days' work of one horse; or \$8,784 50.

If the plankroad were constructed, the cost of transportation on it, if it were a free road, would be that of a draught of 204.6 or 458,304 lbs., which would require 4,583 horses working one day, which is equal to 4,583 days' work of one horse, or \$2,290. The difference of cost on the two roads is \$6,494 50. This amount the carriers could afford to pay annually in tolls for their diminished expenditure in horses, and be as well off as they now are; or if it were to be a free road, they could afford to expend the sum, of which \$6,494 50 is the annual interest for its construction. But as was shown above, this proposed road, if its cost does not exceed \$37,300, can be kept up with tolls amounting to \$5,551 10



per annum. Whence it appears that the traffic already developed and ready to pass on the road, is sufficient to support it, and at the same time to put \$943 40 in the pockets of the carriers. In this view of the subject, no-one can doubt the success of the road.

But we must pass on to the next branch of our subject.

5. *Collateral influences.*—All history teaches that industry is stimulated and quickened by new and improved markets, or by increased facilities of transporting to the points of exchange the products of labor. This is a truism so universally acknowledged as not to require demonstration. The effect of the coal trade in Pennsylvania has been to place in juxtaposition the fuel, the ore, the flux, the furnace, the rolling mill and the nail factory. We have not had time to examine particularly the statistics of the coal trade of New York, Baltimore and Pittsburgh. Suffice it however to say, that the trade of the former city has justified the profitable expenditures of large sums in railroads. With a diminished foreign trade, the city of Philadelphia is yet progressing rapidly in population and wealth, which is solely attributable to her large domestic trade in iron and coal. Baltimore has received a large accession of trade since its communication with Cumberland has been opened—which is continually receiving and contributing very materially to the improvement of the city. Pittsburg is distinguished for its manufactories generally; but it was coal and iron that gave the first impulse to its business, and on which it is now dependent for its great prosperity.

Similar causes generally produce similar effects, and if the trade in coal and iron have produced such results elsewhere, is it too much to suppose that it will impart to Tuscaloosa and the surrounding country a state of prosperity defying all calculation?

This trade will, in addition to the other influences already mentioned, greatly enhance the value of real estate in Tuscaloosa—will cause houses to be built, and will increase population and wealth. Its healthfulness, and its great advantages in water and fuel, will make it the seat of extensive manufacturing operations. We shall then manufacture not only cotton, shoes and paper, but we shall have furnaces, foundries, rolling mills, nail factories, woolen factories, flour mills, &c., &c. The navigation of the Black Warrior will be improved, and steamers and barges will be introduced, adapted to the depth of water during summer and autumn; so that an active trade will be prosecuted all seasons of the year between this city and Mobile and intermediate points. Mobile will thus receive increased spirit and animation at a season when the cotton trade and her commerce are most languid, and place her under obligations to aid the enterprise which is to produce such results. And here too we ought to add, that when we shall have erected foundries and other kindred establishments, instead of going, as we now do, to Pennsylvania, Ohio or Indiana, for our steamers, we shall build them at home at a much less cost, and at the same time give profitable employment to a great number of mechanics, using our own timber and manufactures, and adding to the number of consumers of our provisions.

The facilities of transportation being increased, new staples will be introduced. The lands, especially those east of us, which do not grow cotton advantageously, will be devoted to the growth of wheat and other grain crops. That immense tract of elevated land lying between this and the valley of the Tennessee, which is so admirably adapted to browsing herds, will be brought into requisition for rearing cattle and sheep. Experience has fully demonstrated that the district referred to is the best wool-growing region in the United States, whether we regard the quantity or quality of the product. Wool may be most profitably grown, as I am informed by the few now engaged in the business, at twenty cents per pound; and the reasons that sheep husbandry is not more extensively prosecuted, are, the recent settlement of this section of the country, the absence of a home demand, and the difficulty of transporting to distant markets. But let mills for carding and spinning wool be erected at this place—let a constant market for the raw staple be supplied, and hundreds will presently enter into the business.

We will not stop to inquire, whether the completion of the road, and the consequences resulting, would not generate a trade in naval stores. But we should not be surprised if Tuscaloosa were to supply the home demand for tar

and turpentine. It will certainly increase very greatly the trade in lumber, and enable us to obtain it at a diminished price.

We regard the present projection as the mere initiation of a still grander scheme of improvement. The road to Roup's valley would constitute but a single section in a line extending east, either to the Coosa, or to the contemplated railroad from the Tennessee to the Alabama river; thus connecting us with any part of east or north of us—a result which we have long desired to accomplish. But whether this enlarged design be ever carried out or not, it is perfectly certain that the prosperity and wealth of Tuscaloosa and the country contiguous to the road, and trading to this city, will be greatly increased. This is so obvious a sequence from what has already been said, that we do not deem it necessary to pursue this branch of the subject further.

6. *The means of constructing it.*—That a road imparting so many advantages, as this would; remunerating so largely for the expenditures made upon it, should not be able to command the capital necessary to its construction, would be anomalous indeed. We have no fears upon this point. Men are generally governed by their interests; and this subject has only to be fairly and fully presented to the public mind, in order to convince the most skeptical of the great importance and the entire practicability of the scheme. There is this to be said of the construction of a plankroad; that after it has been located, the labor of the country is competent to construct every part of it. So that we deem it in such a case altogether practicable and advisable, to accept of labor (rated at a fair price) instead of money, in payment of stock. Only some 10 or \$15,000 need be raised in cash, in order to pay for engineering, supervision, steam mills, implements, &c., and all the rest of the stock may safely be taken in labor. Be this as it may, the road will be built. If not by ourselves, it will be by others. It is impossible for articles of such prime necessity, as iron and coal, located just precisely where they are most wanted, to remain long emboweled in the earth. The city of New Orleans is supplied with coal from Pennsylvania, Ohio, Illinois, Tennessee and England, at an average price of \$9 75 the ton.—(*Taylor's Statistics of Coal*.)

Cuba is supplied with coal chiefly from the English pits, at \$11 40 the ton. These places as well as all others situated on the Gulf of Mexico, can be supplied by us more cheaply than from any other locality; and the increasing demand for coal along our southern shores, must develop speedily and extensively our deposits of coal. The Gulf of Mexico will become the most important inland sea in the world. It is the *debouchement* of a system of inland navigation unequalled by any in the world—the outlet of the trade of a valley without a parallel in extent of surface, in fertility of soil, and variety of productions. And when we add to this fact, that on the completion of the railways, now in progress or in contemplation across the Isthmus of Darien, it will be the great highway of nations to Asia and the islands of the Pacific, who can doubt that in ten years its waters will be plowed by twenty steamers for one at the present time. We took occasion to remark in another connection, that ours was the age of steam? It is not for human conjecture to impose limits upon the application of a power so vast, as to annihilate time and distance, in making the ponderous car and the capacious steamship to outstrip in speed the wings of the wind—and yet so perfectly under control, as to draw out the fibres of cotton and wool even to gossamer fineness. Our coal measure, sooner or later, is to supply the fuel for the development of this power on the waters of the Gulf. The time will come, when our posterity will smile at the gravity with which we are here to-day deliberating upon the possibility of constructing a plankroad for the development of mineral wealth, upon which they will spend as many millions as we do thousands.

In view of all which facts and deductions, Be it *Resolved* by this meeting,

1. That the coal and iron deposits in the vicinity of Tuscaloosa are of great extent and value; and that it is the true interest of this section of the State, that they be immediately and properly developed.

2. That this object will be effected to a very considerable extent, by the construction of a plankroad of small maximum grade, not exceeding 1 in 30, beginning at the city of Tuscaloosa, and running along the present Duke's Valley road, as far as the nature of the ground may permit, and terminating at some suitable point in the iron region.

3. That it is important to construct this road within the year 1850, or as soon thereafter as possible.

4. That a committee of five be appointed to obtain a suitable charter from the State legislature.

5. That the value of the shares be prized at \$25.

6. That a committee of five be appointed to petition Congress for a grant of the public lands on the line of the contemplated road, to serve for original construction and subsequent repairs.

That a committee of five be appointed to petition the legislature for a survey of the Black Warrior below the city of Tuscaloosa, with a view of ascertaining the practicability of rendering the river navigable for steamboats during the summer season.

\*All which is respectfully submitted in behalf of the committee.

Tuscaloosa, September 24, 1849.

L. C. GARLAND, Chairman.

NOTE.—In making an estimate of the cost of the plankroad, we have relied upon the grant of the government and the liberality of private individuals to relieve the company from all expense on the score of road way, and the trees from which to saw the lumber. It may not be uninteresting to exhibit the results as affected by additional charges on these accounts.

The right of way should embrace a breadth of 200 feet. This will be 24.24 acres to the mile, and rating the lands at government price, which is their full value in an agricultural point of view, this imposes upon the road a charge of \$30 30 per mile.

A tree that squares 13 inches and affords two cuts of 16 feet each, will make 348 feet of lumber for laying the road; so that 366 trees will furnish the lumber for a mile. One-third of these trees may be obtained on the 24.24 acres of the road way where it passes through the forest, which is generally the case, leaving 244 trees per mile to be purchased. Trees of the size mentioned, are now bought in the vicinity of the road for 35 cents per tree. At this rate, the 244 will cost \$85 40. These two items swell the cost of the road to \$1,353 per mile, and the entire cost to \$40,740.

The perishable expenditure will therefore be \$713 per mile, or \$21,390 for the whole road. To pay a profit of 8 per cent., the road must refund in six years, \$21,390 at 8 per cent. compound interest, and also pay annually the interest on \$19,350, the permanent investment on its construction. The interest on \$19,350 is \$1,548; and the annuity that will refund \$21,390 in six years is \$4,826 42. The income must then be \$6,174 42. But with the supposed increase of trade, its income is, \$14,619 15; leaving a balance in favor of the road of \$8,444 73.

If there should be no increase of trade, the traffic which now passes down the present road would yield, at the New York rates, an income of \$1,611 60. But as one horse on the proposed road will draw nearly as much as four on the present road, while on the New York roads two draw only as much as three, the tolls on our proposed road may be increased in a ratio of 3 to 8 with equal justice to the carrier. But increasing them in the ratio only of 3 to 5, the income amounts to \$7,686, which leaves a balance in favor of the road of \$1,511 58.

So that in the worst aspect of the case, paying for the timber and right of way, receiving no increase of traffic, and charging tolls more favorable to the carrier than those of New York, our road would still pay 8 per cent. upon its cost, with a balance of \$1,511 58 for annual repairs.

L. C. GARLAND.

## 2. ALABAMA RAILROAD ENTERPRISE.\*

I have not alluded to the great overland roads proposed to be run from Memphis or St. Louis, because public opinion is fast determining upon their impracticability. We may set the ball in motion, but it cannot reach home in our day.

It is very evident that much the largest portion of this commerce will be carried on by means of steam vessels, and they must "coal" at some point in the Gulf; and what point so suitable as the harbor of Mobile?

The coast survey, conducted by the federal government, has recently given to the public, in the most authentic form, a knowledge of the true importance of Mobile harbor. In a communication from A. D. Bache, the distinguished superintendent of that work, he states:

"That the depth of water which can be carried over the bar at the entrance of Mobile Bay, at mean low water, is 20½ feet—mean rise and fall of tide, one foot.

"The channel is perfectly easy, one course, N. 19° W. true, going through with one or two casts on the ridge of shoalest water.

"The depth of water at the anchorage of the fleet of merchant vessels in the bay, is 3¼ fathoms. There is perfectly secure anchorage, in any winds, for large vessels, off the west end of Mobile Point, in from eight to ten fathoms water, and distant from the shore from one to one-tenth of a mile.

"In 1832, the greatest depth which could be taken over the bar, was seventeen feet. In 1841 it was nineteen feet, and in 1847 it was 20½ feet, each at mean low water."

He thus concludes:

"From these facts it appears that the (neighboring) islands have been on the increase since

\* Address of Colonel Phillips, continued from February number.

1832, WHILST THE BAR ITSELF, CONNECTED WITH THEM, HAS PASSED GRADUALLY SEAWARD, DEEPENING AS IT ADVANCED."

The confidence which was inspired by the character of this information, soon led the "Royal Mail Steam Packet Company" to make Mobile its point for "coaling," instead of New Orleans. Their steamers now enter the harbor every two weeks, and a market for coal is opened, which, though comparatively small, will increase from the increasing demand, until from the rich mines lying on the route, together with those in the neighborhood of Tuscaloosa—we shall supply the largest portion of the immense quantity which will be required for the navigation of the Gulf, as well as for all local purposes of the country adjacent thereto.

The character of the harbor, as given by Mr. Bache, was fully confirmed by the entrance of the steamers. In a letter, written by W. B. Liot, the general superintendent of the said company, he says :

"Feeling some little degree of anxiety respecting the issue of the first attempt made by the Royal Mail steamers to cross the bar of Mobile, I paid particular attention to the soundings taken on board the *Dee*, when she entered the bay, on the 31st January last, and I was gratified to observe that the *shoalest water* on the bar, when we crossed it, was *full four fathoms* (twenty-four feet)—the *Dee's* draft at the time being precisely seventeen feet. There were two leadsmen sounding when she entered the port—her engines were 'slowed'—the water on the bar was very smooth, and a light air of wind blowing from the south-east."

In this connection, it is proper also to add, that a supply of Tuscaloosa coal was taken by this line of steamers, on trial, and knowing that it had been gathered by inexperienced hands, and taken from the surface where it was easiest to be obtained, without any regard to its quality, some anxiety was felt, in reference to the test, by those of our citizens who took an interest in the experiment. They were gratified, however, by the result, as evidenced by this publication :

"ROYAL MAIL STEAMSHIP *DEE*, HAVANNA, February 25, 1849.

"We hereby certify that the 160 tons of Tuscaloosa coal, received on the 23d instant, is much better than that supplied on the 1st instant, and in point of consumption, is easy steaming coal. It is equal to the Welsh coal, generally supplied to the company in the West Indies; it requires a stronger draft for burning, and has less *clinker* than some of the Welsh coal.

D. GRANT, Chief Engineer.

WM. ALLAN, Com. *Dee*."

Now, when it is remembered that the coal furnished was pronounced equal to the *Welsh*, which is said, for steam purposes, to be superior to any other English coal, and furnished at a less price than could be afforded at the West Indies, and this in the very infancy of the business, we can easily calculate the extent of our advantage, when large capital shall be invested in regular mining operations.\*

What has been said in reference to the abundance of coal may be applied to the stores of iron, limestone and marble, with which this section of our State is stratified. Already, forges have been established in the counties of Benton, Cherokee and Talladega, with most satisfactory results as to the quality of the ore. A gentleman, largely engaged in the manufacture of iron in Pennsylvania, lately visited this State, with a view of transferring his interest to it. I conversed with him on his way home. The result of his examination fully justified the reports he had received of the quantity and quality of the coal and iron—but the cost of transportation to Mobile had deterred him from the enterprise. He remarked on parting, "once build a railroad to the mineral region, or so much of one as will insure its being completed, and Alabamians may, if they

\* We have an analysis of our coal reported by Sir C. Lyell, in the Journal of the Geological Society of London. We give it below, together with that of coal of other localities in the United States:

STATE.	LOCALITY.	BY WHOM ANALYZED.	ANALYSIS.		
			Carbon.	Vol. Mat'r.	Ashes.
Virginia,	Clover Hill,	Johnson,	84.83	33.04	10.13
"	Midlothian,	"	85.01	38.25	14.74
"	Blackheath,	"	88.79	52.57	8.46
Maryland,	Frostburg,	"	74.53	15.13	10.34
"	George's Creek,	"	70.75	16.03	13.22
Pennsylvania,	Blossburg,	Clemson,	73.74	15.00	11.26
"	"	State Rep.,	62.80	32.80	5.20
Alabama,	Tuscaloosa,	London Journal,	80.76	12.96	6.08

By this analysis it appears that the Tuscaloosa coal is not surpassed by any bituminous variety in the United States.

(See the able report of Professor Garland on plankroads.)



will, stick to cotton; eastern skill and capital would soon be at work among the mines."

The highest considerations then appeal to us to construct a road *nearest to market, and therefore cheapest*, and when we contemplate the great trade, which is destined to be poured upon it to supply the great demand, not of our own State alone, but of foreign countries—does it not fall very short of the magnitude of the subject, if not intended as irony, to urge the adoption of Montgomery, or Wetumpka, as the terminus, points more than one hundred miles further from the shipping port, because this would afford an opportunity to *huckster a few flat loads of produce along the river, between those towns and Selma?*

But the utility of the road does not stop here. Crossing the Coosa in Talladega, and meeting it again at Gadsden, or Will's creek, it will afford a cheap and easy transportation for the produce which is now wagoned, at a great expense, from the counties of Talladega, Benton and Cherokee, to Wetumpka, over rugged roads, the difficulties of which were graphically described by a delegate from the county first named, who said that the wrecks of their waggons, and the bones of their horses, strewed along the road, could furnish the fires and manure the fields of all Coosa.

It will bring down the Coosa, which is navigable from this point to Rome, in Georgia, the trade which now goes up stream, to seek a market on the Atlantic.

Reaching from hence to Gunter's Landing, the road will, at once, draw to it the trade of the counties lying north and south of the Tennessee river, in this State, as also the southern and south-eastern counties of the State of Tennessee.

From Decatur (which lies fifty miles to the west of Gunter's Landing) to Chattanooga, 160 miles, the Tennessee river is navigable for a large portion of the year; and this section of country is said to produce 60,000 bales of cotton, to which add 20,000, made upon the Elk, which empties into the Tennessee near Decatur, at the point where the obstruction begins.

The counties which lie west and below the shoals, would speedily complete their improvement to Gunter's, and would add 50,000 bales more. Thus we have 130,000 bales, nearly all of which now goes on a journey of over 1,500 miles to New Orleans.

To appreciate the value of the contemplated road to the country, its chances for profitable business, we should look to the charges of transportation by the various routes now used by the people of that section of the State.

I have casually in my possession, two printed advertisements for freight, one from "Chandler's Through Transportation Line, from Charleston, or Savannah, to Decatur," and the other from the "Coosa River Steamboat Company," from which I make these extracts:

#### CHANDLER'S LINE—FROM CHARLESTON OR SAVANNAH TO DECATUR.

Boxes, bales, dry goods, shoes, saddlery, glass, paints, oils, drugs, confectioneries, shovels, spades, scythes, baskets, tubs and other light articles—per 100 lbs.....	\$2	20
Molasses, sugar, coffee, liquor, bagging, rope, cheese, tobacco, leather, hides, wool, copper, tin, sheet iron, nails, crockery, hardware, and other articles not enumerated below—per 100 lbs.....	1	35
Flour, Bacon (in casks or boxes), pork, beef, lard, tallow, butter, beeswax, pig iron, linseed oil—per 100 lbs.....	1	05
Cotton—per 100 lbs.....	1	10

#### COOSA RIVER COMPANY—FROM GADSDEN TO ROME, AND ROME TO CHARLESTON.

Boxes and bales, dry goods, saddles, paints, oils, drugs, &c.....	\$	1	55
Georgia domestics, sugar, coffee, liquor, bagging, rope and all other articles—per 100 lbs.....	\$	30	92
Molasses, per hhd.....	4	00	15 00
Do. per bbl.....	1	50	4 25
Salt, Liverpool, per sack.....	30	1	10
Barouche, close carriages, wagons, each.....	5	00	30 00
Buggies, gigs, sulkeys, carryalls.....	4	00	18 00
Shovels, spades, scythes, brooms, doz.....	30	1	00
Gunpowder, 35 lb. kegs.....	40	1	00
Ducks, fowls, in coop, per doz.....	35		83
Geese, turkeys, in coop, per doz.....	75		2 75
Cotton, per 100 lbs.....	17		65½

I have no published list of freights by way of the Tennessee to New Orleans, but understand that the average cost of getting cotton to this market is about \$3 a bale, and the up freight \$2 a barrel; at certain seasons less, at others more.

The navigation is not only tedious, but uncertain; and these causes operate upon the producers in the Tennessee valley often to a ruinous extent, by disabling the producer from taking advantage of favorable changes in the market. If I were to assert that the loss to north Alabama, thus occasioned, for ten years, would build this road, however startling the proposition, I believe it would be sustained by facts.

By the best data derived from other roads, cotton could be transported on the route from Gunter's to Selma at one dollar per bale, and barrels on an average of fifty cents, to which add seventy-five cents per bale, and fifty cents per barrel from Selma to Mobile.

The counties of Lauderdale, Limestone, Madison and Jackson, lying on the north of the Tennessee river, contain a population of 80,000, and Franklin, Lawrence, Morgan and Marshall, on the south side of it, about 50,000. Gunter's Landing, which is fifty-five miles from the northeast corner of the State, is a convenient and nearly a central point, whether you regard population or production.

Assuming, then, the amount of 100,000 bales of Alabama cottons, sent by Chandler's line from Decatur at \$1 10  $\frac{1}{2}$  per 100 lbs.—\$5 50  $\frac{1}{2}$  per bale, 500 lbs., ..... \$ 550,000  
Sent by the Tennessee to New Orleans, at \$3  $\frac{1}{2}$  per bale, ..... 300,000  
Sent by the railroad to Selma, and thence to Mobile, at \$1 75 per bale, ..... 175,000

If we suppose that the counties of Cherokee, Benton, Talladega, &c., which would make Gadsden, where the road crosses the Coosa, their shipping port, would furnish for exportation 30,000 bales.

The cost by the Coosa company, would be \$4 12  $\frac{1}{2}$   $\frac{1}{2}$  per bale, ..... \$ 123,000  
On the Selma road, ..... 52,000  
The Selma route compared with Chandler's line, on 100,000 bales, saves ..... 375,000  
Compared with the Tennessee route, ..... 125,000  
And on 30,000 bales at Gadsden, as compared with Coosa river company, ..... 71,200

Rating the up freights at one-half of the amount of the down freight, and making a proportional scale of charges, and the amount of freight saved constitutes alone sufficient inducement to undertake this work. Besides the difference in freight in regard to New Orleans, there is the heavy insurance and the long time occupied in reaching the market.

Take these calculations, which do not pretend to strict accuracy, and regard them only as approximations to the truth, and it will be found that the people of north Alabama, by the construction of this road, would, in a few years, save in time, insurance and freight, an amount equal to the whole cost of its construction.

But we go a step further, and assert that, regarding the work as a mere investment for money, it would prove profitable to undertake it. In this view, the interest of the road extends beyond our State boundary.

From Gunter's landing to Chattanooga, a distance of one hundred miles, the Tennessee is navigable for steamboats of heavy burthen, seven or eight months, and for boats of light draft, all the year.

From Chattanooga to Knoxville, on the Holsten (an eastern branch of the Tennessee), there is a navigation of two hundred miles more, six months in the year, for large boats.

For two hundred and fifty miles above Knoxville, the Holsten is still navigable for barges which descend the river, carrying produce to that town.

From the point where the road will re-cross the Coosa, the river is navigable at all seasons to Rome, in Georgia, one hundred and fifty miles.

These statements would fully justify the expectation, that large freights would be received, both from Tennessee and Georgia; and when we consider that the great Virginia and Maryland improvements all tend in this direction, it is only to anticipate the work of a few years to say, that the link would soon be wrought which will connect them. This will be the great overland route from southwest to northeast, the shortest that could be established between New Orleans and Boston, and the income from mail service and the great travel will swell the profits of the enterprise.

A convention of delegates from the two States of Virginia and Tennessee, recently assembled at Greenville, Tennessee, to consider the best mode of promoting the construction of a railroad from Knoxville to the Virginia line under the charter for the "East Tennessee and Virginia Railroad." Samuel

E. Goodson, Esq., of Washington county, Virginia, presided. About \$150,000 was reported as the amount of the private subscription, and it was resolved to apply to the Tennessee legislature, for subscription of a million and a half of dollars on the part of the State. The advantages of the road are thus set forth :

*Resolved*, That the construction of the East Tennessee and Virginia Railroad, chartered by the last legislature, tapping, by its southern terminus at Knoxville, the East Tennessee and Georgia Railroad, and, through that work already in progress of completion the "Georgia and Carolina" and Nashville and Chattanooga Railroads, and connecting, by its eastern terminus, with that already chartered and three-fifths of the stock taken by the State, from Lynchburg to the Tennessee line, would furnish to east Tennessee, the markets of the Atlantic States and Gulf cities, and open a direct thoroughfare between the northeast and southwest, for the amount of travel and transportation, it must command, unsurpassed by any other line of equal extent in the Union.

In reducing the estimated profits of the road to figures, I rely somewhat upon a published calculation made for this work on the old Dexter line :

100,000 bales from north Alabama, above and below the shoals in the Tennessee, including also the counties of Marshall, Blount, De Kalb, and St. Clair, at \$1.....	\$ 190,000
50,000 from Cherokee, Benton, Talladega, Shelby, Jefferson, Bibb, Perry, Autauga and Dallas, at an average of sixty cents $\frac{3}{4}$ bale, .....	30,000
15,000 lbs. flour, 8,000 lbs. distilled spirits, 3,000 lbs. Irish potatoes, 25,000 lbs. oats, corn, &c., 7,000 lbs. fruit, onions, &c., 8,000 lbs. pork and beef,.....	66,000—50c. 33,000
8,000 casks bacon, at \$2,.....	16,000
Bagging and rope, .....	10,000
Iron, castings, salt, tobacco, limestone, &c., .....	15,000
Coal,.....	10,000
	<hr/>
	\$ 214,000
Add up freight equal to one-half, .....	117,000
Forty passengers each way, at \$3, .....	230,000
Way travelling and mail, .....	50,000
	<hr/>
	\$ 611,000

## DEDUCT EXPENSES.

Ten engines at \$20 $\frac{3}{4}$ diem, .....	\$ 62,000
Keeping road in order, \$200 $\frac{3}{4}$ mile, .....	34,000
Fifty hands at woodyards, water stations, warehouse, &c.,.....	7,500
Superintendence, .....	5,000
Collectors, .....	5,000
Three assistants at \$500, .....	1,500
Stationary power of necessary workshops and all other expenses, .....	17,000
	<hr/>
	131,500
	<hr/>
	\$ 479,500

Which upon an estimate of \$2,000,000, is equal to twenty per cent.

But though the dividends did not prove it the most profitable investment for money, to the capitalist who was disconnected with the interests of the State, yet those who owned property within the influence of the road, would find in its increased value the largest compensation. The experience of the whole country, places this above doubt or controversy.

Every consideration, therefore, which can address itself either to patriotic or pecuniary motives, speaks trumpet-tongued for the speedy completion of this great enterprise.

But I hear it argued in this debate, that the citizens of Alabama cannot furnish the necessary capital; that the means must be supplied by foreign aid; and that this road should take the route east of the Coosa to connect with the Montgomery and West Point road, in order to obtain the assistance of the Georgia and Carolina companies, whose lines will soon connect with it. It certainly would be paying dearly for this assistance, were we to give so large a portion of our commerce in consideration of it. That the effect of this connection would take the trade out of our State, is too clear for question. The very terms of the proposition itself imply it.

We are cited to the fact, by a delegate from Montgomery, that the citizens of Charleston own \$80,000 in the Montgomery road; this may be all true. The citizens of Charleston believe that their interest will be subserved by completing

the road through—and this I think a much clearer proposition than that it will benefit the citizens of Montgomery.\*

But we are not driven to this alternative, we can struggle with our difficulties and manage our domestic interests without calling in the Russians, for the State is not so poor as this argument implies.

It is true—if you judge her by the number of her canals or the length of her roads—she has done nothing. But let us look at her productions and remember her age.

Take the article of cotton alone, and we find the receipt at Mobile, for 1848-9,.....530,000  
Add amount shipped from north Alabama to New Orleans, ..... 96,500  
From east Alabama, shipped to Apalachicola, ..... 50,000

..... 676,500  
Deduct less amount received from eastern Mississippi, ..... 80,000  
..... 596,500

Adding the amount which goes from the eastern counties to Charleston, of which we have no account, and we may safely put the crop at 600,000—worth twenty millions of dollars—Alabama then ranks at the head of the cotton growing States, and, valuing her by the receipt at Mobile, she stands in the public statistics fourth on the list of exporting States, New York, Louisiana and Massachusetts alone out-ranking her. But give her the benefit of her true amount, and not the Mobile index, and old Massachusetts, with all her age and wealth, must stand aside and give the third place to her young sister of the southwest.

The whole number of acres in this State is estimated at, .....32,460,080  
Of this our citizens already own, .....15,911,520  
For which they have paid the government, .....\$16,888,000

Now add to this the enormous amount they have paid to Virginia, &c., for so many thousand slaves, and all this accomplished in a country where the footprint of the Indian is yet to be seen, and we shall begin to discover there has been no lack of energy and enterprise here.

In this estimate of strength, we should not overlook the advantages of an increasing population.

By the census of 1820, population, .....127,901  
" " 1830, " .....309,527  
" " 1840, " .....590,756

These figures demonstrate the energy and resources of our State. And when we consider that our citizens have made no investments in stocks of any kind, can we assent to the proposition so emphatically announced, that the road to Gunter's landing cannot be built without the help of foreign aid. No, gentlemen, we will first try our own shoulders to the wheel before we call on Hercules.

In the session of 1844, I brought to the notice of the legislature the propriety of executing a thorough geological survey of the State, a large committee was then appointed, and although it was unanimous in the opinion that an appropriation for that purpose should be granted, yet judging, from the temper of the House, the measure would not carry, it was determined not to hazard the chances of a defeat, but to wait for a more propitious season. I think the State is now so fully alive to its importance, that the application for a suitable appropriation should be made, and I trust that some gentleman on this floor, who concurs with me, will move the adoption of a resolution by which this question shall be properly presented to the next legislature.

I may be told that the State has a large debt to provide for, and is therefore in no situation to make such appropriations. I fully appreciate the difficulty. No one recognizes more strongly than I do the sacredness of the obligation to her creditors, and the necessity of preserving in time to come, as she has through the vicissitudes of time past, her credit untarnished. But when dangers threaten, in peace or war, boldness of action is the highest prudence. It will not do for the State, through a false timidity or economy, to refuse the exercise of that wide supervision of the interests of her people which is a duty inherent in all governments. These interests are to a State what life is to an individual, and the first and greatest law calls for their preservation.

\* Of course I mean those citizens who are not themselves stockholders. In the rapid multiplication of roads it has been already demonstrated, that the companies' interest may be often adverse to the interest of particular localities. Witness the attempt to cross the river at Augusta, and the controversy between the stockholders and the citizens of Macon.



I therefore desire that the State should exercise economy, but an enlightened economy, and I feel that in devoting the necessary funds for this purpose she will increase the means of her citizens and thus strengthen her own hands.

Let the knowledge of our vast mineral resources be spread, not only before our own people, but before the world, in such authentic shape as will place them beyond question, and we will attract to our State both population and capital.

The present period is auspicious, as money everywhere is commanding but moderate interest. The inducements held out by the richness of our mines will be increased ten fold by the road to connect them with a market. The two interests will afford a reciprocal action—the mines building the road and the road working the mines.

Any appropriation, then, which will be required for a scientific geological survey of the State will redound not only to the power and honor of the State, but in increasing the subjects of taxation, prove the value of an enlightened economy.

I have already adverted to the advantages of this road, not only as it affects the interior, but as increasing and enriching our own and only seaport. At present, the city of Mobile pays one-sixth of the whole taxation of the State, and by adding the commerce which this road will give, you enable her to pay a proportionate increased amount.

Those of you who have visited Mobile know that a more eligible location for a seaport town does not exist south of Baltimore. The body of the city, and its beautiful suburbs, combine every requisite for the transaction of an extensive commerce, and the location of a large population.

It will then become the pride, as it is certainly the interest, of Alabama, with her annual produce of 600,000 bales of cotton, with her inexhaustible beds of coal, iron, limestone and marble, with her cheap compulsory labor, with her large and increasing population, to build up by fostering care this emporium of her commerce.

Relieved from the pressure of past misfortunes, the citizens of Mobile, actuated by a determination to take advantage of their commanding position, have entered, with great energy and steadiness of purpose, into the construction of a railroad reaching to the mouth of the Ohio, a distance of four hundred and sixty miles. The general route is up the left bank of the Tombigbee, passing through the county of Sumter, in this State, touching at Savannah on the great southwestern bend of the Tennessee, diverging thence to Columbus, near the junction of the Ohio and Mississippi. The effect of this work upon the interests of the city must eventually be very great. It brings the Mississippi valley and the Gulf within thirty-six hours of each other, and thus establishes itself as an important channel for the immense and varied produce of that most fertile portion of our country. It will also, when connected at Columbus with the Illinois road, which commences at lake Michigan, be the great line running almost due north through the very center of the Union. And should either of those gigantic routes from Memphis or St. Louis to the Pacific be ever completed—this will be the great branch through which nearly all of that commerce demanded by the Gulf will flow.

As some mention has been made, during this discussion, of the attempt to establish a direct trade between Montgomery and New Orleans, thus cutting off Mobile, I beg leave to say for myself, and I am satisfied I but speak the voice of my constituents, that however this attempt originates, though for many reasons I regret it, I do not complain of it.

Commerce is founded upon mutual exchange, and its great law in all countries, and in every age, is, *to buy in the cheapest market and sell in the dearest*. The citizens of Mobile do not expect to see this great law of trade yield in their favor, either to feelings of friendship or motives of patriotism.

If then the people of any section of our State (uninfluenced by improper prejudice), judge it to their interest to carry their produce past the wharves of Mobile to New Orleans, it is not only their right, but their duty to do so. Let those who wish it make the experiment, and I feel sure they will soon become satisfied that they can do as well by staying at home as going abroad. A highly intelligent merchant who lately resided in New Orleans, and now represents on this floor the town of Wetumpka, has frankly admitted that the price of cotton will average the same in both cities, but states that in New Orleans no charge is

made for storage and drayage; that the pressman now pays this, and finds his compensation in the price for compressing.\* Now it is evident that the charge for compressing must enter into the question of freight, and this we know influences the price. So that the effect upon the producer is the same. For whether the price be affected indirectly through the freight, or directly through the charges for selling, is but of little consequence.

The project, then, I regard as purely a business transaction, and not founded upon feelings of hostility in any quarter; and I am supported in this by the emphatic declarations of the gentlemen from Montgomery, who state that the citizens of the capital had no share in fostering the enterprise, nor do they own a dollar of its stock.

The persons, therefore, who are concerned in it are most likely those who, by their former connection with this State, would expect to reap the benefits of the transfer of trade to New Orleans, where they now reside. They will, therefore, continue it just as long as it is profitable, and quit it when it ceases to be so.

Considering all the advantages which Mobile possesses from natural causes, if there is not energy or skill enough among her merchants to make it the interest of her own neighborhood to trade with her, then she ought to sink to the lowest point of degradation, undeserving even the sympathy of her friends.

I cannot close these remarks without noticing the extraordinary position taken in reference to the delegation from Mobile. They are urged to take no part in the decision which is to select the route; they are asked to form no opinion, and if they do, to express none; and in the ardor of debate, they have been cautioned not to excite the ire of certain contending localities. The reason given for this extraordinary appeal, is, that whether the road terminates at Wetumpka, Montgomery, or Selma, the city of Mobile would equally become the recipient of its trade and travel.

On behalf of that delegation, I must be permitted to say, that no feelings of a local character influence their action here. They came to this convention under the most liberal instructions. In legal parlance, they were left "to do in the premises whatever (their constituents) might lawfully do were they personally present," and in making a choice between the various routes proposed, they have no motive of an improper character to sway their judgments. Indeed, I might truly add, that were they to be governed by mere local considerations, the strongest social and commercial ties would incline them to Montgomery. When Selma contended with her for the high honor she now enjoys, the vote of Mobile and the adjacent counties contributed to crown her as the capital of the State. There, upon her loftiest eminence, stands that magnificent temple, reared by the unaided efforts of her own citizens, at once a monument of their munificence and an honor to the State, and there may it stand forever. The past affords none but the most kindly relations; and I see nothing in the future to mar this harmony.

But neither this appeal or these considerations, or any threatened consequences,

\* The average price of middling and fair cottons in New Orleans for the years 1844 and 1845, 6.25; 1845 and 1846, 7.37; 1846 and 1847, 10.37; 1847 and 1848, 7.44; 1848 and 1849, 6.18: 37.61 or 7 3/4 cents  $\text{per lb}$ .

Average price of middling and fair cottons in Mobile for the years 1844 and 1845, 5.50; 1845 and 1846, 7.37; 1846 and 1847, 10.38; 1847 and 1848, 6.81; 1848 and 1849, 6.00: 35.93 or 7 3-16 cents  $\text{per lb}$ .

Average rate of exchange on London in New Orleans for 1846 and 1847, 5.25; 1847 and 1848, 6.70; 1848 and 1849, 7.52: 19.47, average \$6 49.

Average rate of exchange on London in Mobile for 1846 and 1847, 5.09; 1847 and 1848, 5.92, 1848 and 1849, 6.89: 17.90, average \$5 97.

Average rate of exchange on Paris in New Orleans for 1846 and 1847, 5.42; 1847 and 1848, 5.34; 1848 and 1849, 5.28: 16.05, average for three years \$5 35.

Average rate of exchange on Paris in Mobile for 1846 and 1847, 5.45; 1847 and 1848, 5.43; 1848 and 1849, 5.34: 16.22, average \$5 54.

And as to freight, we will take a ship of 800 tons and compare the expenses of the two ports. The ship to New Orleans pays \$468 towage from the mouth to the city, \$190 levee dues, and if removed from the municipality at which she first moors, \$3 a day more. Suppose her cargo to be 2,500 bales of compressed cotton—her compressing at 50 cents per bale is \$1,250; average drayage, 15 cents per bale, \$375; extra labor in getting aboard, 5 cents per bale, \$125; stevedore charges, 35 cents per bale, \$875; towage from the city to the bar, \$265; do. from bar to sea, \$95. Total, \$3,643.

The same ship arrives in Mobile bay, and pays the same rates for compressing, \$1,250; drayage, 10 cents, \$250; wharfage, 8 cents, \$200; lighterage, 20 cents, \$500; stevedore charges, 25 cents, \$625—total, \$2,835. This shows a net profit of \$818 for the vessels and shippers, in favor of loading the ship at Mobile.

can or ought to deter the representatives of Mobile from taking their share of responsibility in determining the great measure before us.

What though the interests of Mobile are to be equally subserved, let the road go where it will? Are her representatives to have no regard to the rights of others? Is the good of the State to be excluded from consideration? And while all others are professing regard for the *general welfare*, is the Mobile delegation alone to occupy the selfish position of representing a mere local interest? For myself, I can never consent to sink the duties I owe to the State into the narrower obligations due to the city. And knowing as I do the high character of the gentlemen who have urged these views, I am satisfied their "sober second thought" will confirm the propriety of this determination.

When, then, this convention shall announce its judgment, let us hope for a unanimous acquiescence; and when it adjourns, let it be in that spirit *which shows its faith in works.*

### 3. THE LEVEE SYSTEM OF LOUISIANA.

[Prof. Forshay, in the Concordia Intelligencer, has maintained the following, from long experience and study of the subject.]

1. For about fifty years, the levee system may be said to have been in full operation in the vicinity of New Orleans, and for some fifty miles below, to one hundred miles above.

2. The water does not rise higher at present, than before levees were known. *Proof:* Some registers have been kept by nature, such as the alluvial deposits at Burthe's, at Soniat's and at alternate points from the Buras settlement, fifty miles below the city, up to Lake Providence, showing at present a surface level as high and even higher than the water of 1828 or 1849. *The river must have risen high enough to depose those points*, and hence, must have raised higher, in those days, than since levees were introduced.

Again: Some registers have been kept by observers, which, for thirty years, give us a fair test. From the year 1817, when there were very few levees about Concordia, to 1847, when the levees were extended almost continuously from fifteen miles above the mouth of Red river, to a distance of two hundred miles up, there was a register of the river's fluctuations—rise and fall—kept at Vidalia, by Governor Sargent, first, and continued by Mr. Samuel Davis up to 1840, and by myself thence to 1847.

The mean high-water of ten years, up to 1827, before levees were used, was fifteen inches higher than for the next ten years, up to 1837, while levees were being extended; and the mean of those ten years give us a higher mark than the last nineteen, up to 1847, by eleven inches.

Therefore, we conclude from this fact, what we should have inferred from hydrology, that the effect of confining the waters in the channel is not to raise, but to depress the level.

We should infer from theory, that the effect of levees would be to increase abrasion, and hence, to enlarge the capacity of the channel. Hence, the caving away of banks.

*Query.* But what is the remedy?

*Answer.* Make better levees—wider, higher, stronger, further back from the river; place their management in the hands of salaried officers, who give high bonds for the faithful discharge of their duty, who have charge of districts indicated by the topography of the country. Give them plenary powers; place funds at their disposal, that they may act promptly when the planter is delinquent.

*Secondly,* Place the public road on the summit of the levee, and let all the work done on both, heretofore, be limited to the one. Thus, we shall have security.

### 4. THE CANALS OF NEW YORK.

The report of the canal commissioners, made at the close of the last year, shows in operation 723 miles of canal in the State. There remain to be completed, in a short time, 211 miles, which will make the aggregate 899 miles. The largest boat load, passing upon the canals, weighed 2,000 tons. The amount of tolls collected, on all the canals, in 1848, was \$3,252,212; in 1849, \$3,268,226. The following shows the total value of all articles moving upon the canals:

	<i>Product of forest.</i>	<i>Agriculture.</i>	<i>Manufac.</i>	<i>Misc.</i>	<i>Other articles.</i>	<i>Total val.</i>	<i>Total tolls.</i>
1837.....	\$6,146,716	\$16,201,381	\$6,390,485	\$23,935,990	\$3,131,766	\$56,809,288	\$1,289,430
1838.....	6,338,063	19,390,714	6,915,856	31,594,892	2,507,234	65,746,559	1,589,357
1839.....	7,762,553	17,056,911	5,989,576	39,493,764	3,096,960	73,399,764	1,614,966
1840.....	4,000,035	18,644,481	4,719,054	35,636,943	2,794,379	66,303,892	1,775,747
1841.....	11,841,103	21,901,713	5,422,615	50,134,320	2,908,178	92,202,929	2,034,882
1842.....	5,957,319	16,987,843	4,435,289	30,012,153	2,594,104	60,046,608	1,749,196
1843.....	6,653,080	20,588,118	4,925,545	40,651,798	3,458,368	76,276,909	1,081,590
1844.....	7,422,737	23,379,643	6,151,806	49,224,009	4,742,857	90,921,152	2,446,374
1845.....	6,472,257	29,479,488	6,994,932	52,543,336	5,140,866	100,629,959	2,646,181
1846.....	6,322,409	35,820,586	7,015,311	62,004,488	4,349,315	115,612,109	2,756,106
1847.....	7,546,063	55,757,166	8,072,059	74,753,638	5,434,502	151,563,428	3,635,381
1848.....	7,219,350	42,850,096	7,433,957	76,945,463	6,637,301	140,086,157	3,252,212

Statement showing the aggregate value of the property which came on the Hudson river, on all the canals, during the years 1847, 1848 and 1849:

	1847.	1848.	1849.
The forest.....	\$8,798,373	\$6,900,015	\$8,044,646
Agriculture.....	54,624,849	37,338,290	38,053,206
Manufactures.....	6,024,518	3,834,360	3,899,237
Merchandise.....	517,594	593,619	608,043
Other articles.....	3,127,080	2,210,623	2,280,473
Total.....	\$73,092,414	\$50,885,907	\$52,785,610

Statement of the tonnage and value of all the property which went from the Hudson river, on all the canals, in 1848 and 1849:

	1848.	1849.
Tonnage.....	329,561	362,340
Value.....	\$74,943,450	\$69,590,042

## 5. RAILROAD FROM NEW ORLEANS TO JACKSON, MISS.

Some time in December last, there was held at Monticello, Mississippi, a convention of the people of that State and of Louisiana, to take into consideration the propriety of constructing a railroad to connect the cities of New Orleans and Jackson. The convention was well attended, and after passing several resolutions and appointing appropriate committees, it adjourned over to meet again in New Orleans, on the 21st March ensuing.

From the resolutions of the Monticello meeting, which were published in the Commercial Review for February 1850, the following is extracted, as expressing the sense of that body in reference to the contemplated enterprise:

"WHEREAS, This convention, after careful investigation of the subject, believes that the interests of the States of Louisiana and Mississippi and the city of New Orleans, would be greatly promoted by a railroad from New Orleans to the city of Jackson, and that thereby the resources would be developed of a valuable portion of country now comparatively worthless for want of a convenient outlet to market—that it would promote the convenience of people living in the counties and parishes lying along the line of the road—increase the value of their estates, and add millions annually to the value of the country; and this convention believing further, that it is highly practicable to construct such a road, and that the public spirit and pecuniary ability of the country through which it will pass, as well as at each terminus of the road, may be safely relied on to furnish the means both in money and labor, for the construction of said road, therefore,

"Resolved, That the convention pledge itself to a strong, united and vigorous exertion, in behalf of said road; to sink all men or differences of opinion, and all individual preferences in relation to the route of said road, when the same shall have been located, and yielding to the greatest good of the greatest number, unite hand and heart in its completion."

Immediately after the adjournment of the Monticello convention, the right of way for the road was obtained from the legislature of Louisiana, and a charter from Mississippi passed by a vote of two-thirds of the legislature of that State.

The capital stock of the company is fixed by the charter at \$2,000,000, and Samuel J. Peters, John M. Bell, James Robb, M. C. Penn, Jehu Wall, John T. Lamkin, William A. Stone, Colin S. Tarply and Ebenezer Ford, appointed commissioners, with power to fill vacancies, etc.

The shares, \$100 in value, each, may be taken in money or in labor, and as soon as \$500,000 is subscribed for, the company shall go into immediate action: Not more than ten per cent. shall be required by the company at the time of subscription, and not more than 33½ per cent. of the value of stock taken, shall be required in any one year.

When \$500,000 is obtained, the commissioners shall call a meeting of stockholders, and from their number select a president and four directors, assigning such salaries as they shall respectively receive, by the vote of stockholders. No stockholder to be entitled to cast more than 100 votes, whatever his number of shares, either personally or by proxy.



By the 15th section, the board of police in the counties, are authorized, with the concurrence of the majority of the voters thereof, to subscribe for stock, and impose a special tax on the county to pay the installments, etc. By the 16th section, the company may increase its stock, if necessary, to complete the road. Stockholders shall only be responsible to the extent of their stock.

By the 19th section, the capital stock and property of the company, are exempted from taxation for fifteen years.

The 20th section appropriates \$2,000 for the prosecution of surveys, etc.

The act of incorporation to be in force for fifty years.

The adjourned meeting of the convention was held in New Orleans at the time appointed, and we extract the proceedings as published in the *Picayune*:

"The list of delegates having been handed in, there appeared twelve members from the parish of Orleans, three from St. Tammany, three from Washington and four from St. Helena. From Pike county, Mississippi, three, Simpson one, Copiah four, Lawrence four, Hancock two, and Hinds thirteen.

"The president informed the committees that if they had any reports to make they would now be received.

"Mr. Grice from the committee on routes, stated that they had not been able to prepare a report to submit to the convention, as they did not feel authorized to contract a debt without an appropriation having been made by the convention.

"He then read an address, showing the practicability of the enterprise, and what he considered the most feasible and practicable route. He advocated the route commencing at the town of Madisonville, in the parish of St. Tammany, and running nearly a north course to the intersection of the Nashville railroad route, thence to the city of Jackson, along the line of that survey. The most important reason adduced for commencing at Madisonville, was to avoid the thirty miles of swamp or marshy land between New Orleans and the pine lands on the north shore of lake Pontchartrain. He gave a description of the country, accompanied by a map, showing the line of his projection. He combated the opinions in favor of other routes by exposing the impediments with which they were obstructed.

"He proposed to connect Madisonville with New Orleans by a line of steamers across lake Pontchartrain, and estimated the cost of the whole work at \$2,000,000, and he thought it could be completed in three years. Referring to the benefit to be derived from this communication, he exhibited a prospect of its connecting with a railroad, from Jackson toward Montgomery, Alabama, and of its intersecting the Mobile and Ohio railroads.

"Col. Tarpley then arose and stated, that as one of the committee appointed to procure a charter for the railroad from the legislature of Mississippi, he would report that their efforts had been successful, and that the bill incorporating the company had passed the legislature of that State. The secretary was then requested to read the bill, after which Col. Tarpley remarked, that the charter which had just been read was as favorable as any railroad charter in the Union. Some of the provisions he considered entirely too liberal, but such was the anxiety manifested to pass the bill, that, notwithstanding the opposition of the Governor, it was carried over his head. He had drawn up and prepared this bill, with the charters of the principal railroads in the United States before his eyes. He alluded to the progress the State of Georgia had made in consequence of the liberal provisions granted by the legislature of that State. It was to the liberality it has displayed in granting railroad charters, that the State of Georgia owes its prosperity, and that it now boasts of over 1000 miles of railway. The bill granted by the legislature of Mississippi had been drawn up after the liberal provisions of those of the State of Georgia. There was no sectional or petty feeling existing in the legislative body of Mississippi in regard to the charter of this company. It was a national and republican feeling for the general welfare of the country that the people of Mississippi entertained, not for the present but for ages to come, that prompted the passage of the bill. There was the right spirit in Mississippi in regard to internal improvements, and this bill was an evidence of her feeling, and the heartfelt interest manifested toward internal improvements. She did not ask where this road was to terminate on the lake shore. No petty sectional feeling governed her in the passage of the bill. She cared not where it terminated so that it communicated with the city of New Orleans. It was the road she wanted, and she was willing it might terminate any where, so that the true object be carried out, and he felt sure that the same noble and magnanimous feeling would actuate the people of Louisiana.

"The committee on statistics were then called upon, when Mr. DeBow remarked that Mr. Robinson, the chairman of the committee, was not present. He would, however, say that they had before them a large mass of statistics which would at a proper time be laid before the convention.

"Col. Tarpley stated that as Mr. Marshall, the secretary, had been obliged to leave for his home, he would nominate Mr. G. S. Fonte and C. A. DeFrance as secretaries, which motion was carried.

"J. G. Gribble, of Orleans, then offered the following resolutions:

"Resolved, That a committee of three be appointed to prepare a memorial to Congress, praying a grant of the alternate sections of public land for six miles on each side of the railroad, and also the right of way through the same where the road shall be located. That said memorial, when reported and adopted by this convention, be signed by all the members of this convention in their representative character.

"Resolved, That the said committee be requested to use the most prompt measures to secure the action of Congress on said memorial, and, if possible, send an agent to Washington to urge the matter there.

"On motion, the above resolutions were adopted.

"Mr. Clendenny, of Orleans, then offered the following resolution:

"Resolved, That this convention recommend to the board of commissioners, the route from Jackson, Mississippi, by way of Monticello and Holmesville to the town of Madisonville, and that Madisonville be made the southern terminus of the proposed railroad, with water commu-

nication from that point by steamboats across lake Pontchartrain to New Orleans, as the most practicable route for the road, and the best calculated to ensure the success of this enterprise.

"A communication was received from Wm. S. Boyce, Mayor of Lafayette, appointing Messrs. F. B. Conrad, J. F. H. Claiborne, T. J. Ivy, and P. N. Wood, as delegates to this convention to represent the parish of Jefferson.

"On motion, they were admitted to a seat, and Mr. Wood added to the vice-presidents.

"Mr. Alfred Hennen, of the committee on memorials, reported, that, in obedience to a resolution passed yesterday, he had drawn up a memorial to Congress praying for alternate sections of public land of each township on each side of the contemplated road in the States of Mississippi and Louisiana. The memorial was read and adopted.

"Mr. Cendenen made an adverse report to the resolutions of Mr. Gribble, which, on motion, was received.

"Mr. Grice then offered a set of resolutions providing for the appointment of a competent engineer for the purpose of surveying the three routes named in resolution number 2, and that the commissioners of Louisiana be authorized to accept the termini offered by the commissioners of Mississippi.

"The debate on the first resolution offered by Mr. Grice grew out of a motion to amend, by Mr. Debow. After some explanations made by Mr. Foute and the president, the amendment of Mr. Debow was, on motion of Judge Harris, adopted, and the resolution as amended was passed. The second, third and fourth resolutions were then taken up and adopted. The following are the resolutions as amended.

"*Resolved*, That the commissioners appointed under the late act of the legislature of Mississippi, granting a charter for the New Orleans and Jackson railroad, be requested to employ the services of a competent engineer or engineers, for the purpose of surveying the three routes named in resolution number 2, at the Monticello convention, and that the said commissioners adopt the best and most practicable route, and the one which according to the surveys and estimates will appear the most expedient.

"*Resolved*, That the commissioners on the part of the State of Louisiana be further requested to raise by subscription the sum of \$1,000, to aid in defraying the expenses of said survey; and when said surveys are completed the engineers will report the same to a meeting of the commissioners named in the charter aforesaid, to be held in the city of New Orleans on the first Monday of July next.

"*Resolved*, That said commissioners be also requested to call a public meeting of the citizens of New Orleans, as soon as practicable, for the purpose of recommending an 'incorporation' under the act of Louisiana, approved March 16, 1848; and that books of subscription, in conformity with the provisions of said act, be provided by them at the office of some notary public in the city of New Orleans, for the purpose of receiving subscriptions to stock in the New Orleans and Jackson railroad—which books shall remain open for the space of sixty days.

"*Resolved*, That public notice be given by said commissioners of the time and place of opening said stock list, by publication in three of the newspapers in the city of New Orleans, once within every ten days preceding the final act of incorporation.

"A committee of three were then appointed to have printed in pamphlet form the proceedings of the convention.

"On motion, the president was authorized to sign the names of the absent delegates to the memorial to Congress.

"The convention then adjourned sine die."

## DEPARTMENT OF COMMERCE.

### I. SUGAR AND MOLASSES EXPORTS OF CUBA.

In 1849, there were exported from Havanna 602,220 boxes of sugar, against 684,981 the previous year, and 241,106 boxes against 310,662 from Matanzas. Of the Havanna exports, Spain took 107,188; Britain, 90,479, and the United States about 62,000 boxes, in 1849. Of the Matanzas exports, Britain took 47,286; Russia, 30,496; Spain, 22,148, and the United States about 51,000 boxes, in 1849. The molasses exports of Havanna, in 1848, were 26,960 hhd.; in 1849, 36,692. The Matanzas, 52,210 hhd.; in 1848; 58,597 in 1849. Four-fifths of these exports are to the United States. The molasses exports of Cardenas were 73,983 hhd. in 1848, and 65,757 hhd. in 1849—almost entirely to the United States.

### 2. TRADE OF CHARLESTON.

The trade of Charleston, S. C., is gradually but steadily increasing. The value of the exports to foreign ports, during the year 1849, was \$15,838,291, of which \$10,243,771 was to foreign ports, and \$5,494,520 coastwise.

## 3. EXPORTS FROM PHILADELPHIA.

The following is an official statement of the amount and value of the exports from Philadelphia, during the year ending the 30th of September last :

Flour, bbls.,.....	223,397	\$1,187,584	Beef, bbls.,.....	4,077	87,573
Wheat, bush.,.....	242,554	284,650	Tallow, lbs.,.....	274,316	
Corn, bush.,.....	1,205,223	749,021	Pork, bbls.,.....	11,288	693,273
Corn meal, bbls.,.....	118,291	336,523	Hams, lbs.,.....	5,591,428	
Rye meal, bbls.,.....	26,351	82,000	Lard, lbs.,.....	2,340,584	80,852
Ship bread, bbls.,.....	22,514	79,866	Butter, lbs.,.....	546,292	
“ kegs,.....	7,320	1,012	Cheese, lbs.,.....	210,372	10,391
Potatoes, bush.,.....	4,508	3,371	Tar and pitch, bbls.,.....	616	
Apples, bbls.,.....	670	48,174	Resin, bbls.,.....	6,423	3,180
Rice, tierces,.....	2,301	104,808	Sperm oil, galls.,.....	2,909	
Cotton, lbs.,.....	1,359,109	67,813	Whale oil, galls.,.....	54,166	28,991
Tobacco, hhds.,.....	1,196	148,870	Sperm candles, lbs.,.....	90,731	
Candles, lbs.,.....	7,358,471	49,639	Coal, tons,.....	1,709	53,168
Soap, lbs.,.....	1,153,998	6,887	Bark, hhds.,.....	1,620	
Tobacco manuf., snuff, lbs.,.....	190,074	2,766	Pulse or small grain,.....		11,011
“ Tobacco, lbs.,.....	10,653		Furniture,.....		
Dried fish, quintals,.....	2,600		Manufactured iron,.....		15,579
Pickled fish, bbls.,.....	671		Drugs,.....		
			Domestic cottons,.....		166,071

## 4. COMMERCE OF FRANCE.

Hunt's Magazine gives a translation of the annual report of the French Department of Customs, for the year 1848, from which we make the following extracts :

The general commerce of France with her colonies and foreign nations, in 1848, amounted, including imports and exports, to 2,015,000,000f.

This is 599,000,000f., or 23 per cent. less than the previous year—384,000,000f., or 16 per cent. less than the average of the five previous years.

## MARITIME TRADE.

Out of 1,144,900,000f., the value of the maritime trade, the amount of goods carried under the French flag is 712,000,000f., or 49 per cent.; under foreign flags, 729,000,000f., or 51 per cent. The proportion was 46 to 54, for the year and the past five years. The decrease of the share of the French marine is 19 per cent., compared with the last year—11 per cent., compared with the past five years. The falling off as respects foreign vessels, is but 30 per cent. on the first, and 21 per cent. on the second, period.

## IMPORTS AND EXPORTS TOGETHER.

Of the general commerce of France, the share of the United States, England, Switzerland, Belgium, Sardinia, Spain, the German Customs Union, Russia and Turkey, is 71 per cent.; that of Brazil, the Low Countries and the two Sicilies, five per cent. Of the colonies, Algeria alone shares in the movement to the extent of 4½ per cent., and to her belongs the seventh place in the list. The share of the other colonies is but five per cent. The trade with both the United States and Sardinia has fallen off 16 per cent.; with Belgium, 24 per cent.; with Spain, the German Union, Russia and Turkey, 21, 39, 56 and 57 per cent., respectively. England and Switzerland alone present different results, the increase for the former being 11,000,000f., and 4,000,000f. for the latter, or four and two per cent.

In imports of products for home consumption, and exports of articles for home production, England takes the lead of the United States—in 1848, the amount of this trade with the latter being 217,500,000f.; with the former, rather more than 218,000,000f. The advance on 1847, for England, has been ten per cent.; the falling off for the United States, 16 per cent. In the actual value, 12 per cent. increase for the former, and 30 per cent. decrease for the latter. In 1847, the amount of the English trade was 189,000,000f.; of that of the United States, 223,000,000f. In 1848, that of the English was 212,000,000f.; of the United States, 156,000,000f.

In the transit trade, Switzerland has maintained the first place, as respects the value of goods exported, and the United States the first, as respects the value of goods imported; the former being 42 per cent. of the whole, or two per cent. more than in 1847; the latter is 29 per cent., a diminution of four per cent.

The following tables, taken from the report, exhibit the export and import trade of France with the United States, in 1848:

## IMPORTS FROM THE UNITED STATES INTO FRANCE.

	GENERAL COMMERCE.		SPECIAL COMMERCE.	
	Quantity.	Value.	Quantity.	Value.
Cotton wool, kil.,.....	54,312,454	48,881,200f.	43,248,984	38,924,085f.
Leaf tobacco,.....	6,538,923	6,538,923	5,920,139	5,890,139
Hogs' lard,.....	3,336,778	2,336,745	1,966,244	1,376,371
Copper,.....	836,598	1,840,516	568,773	1,251,300
Gold dust,.....	54,936	1,648,080	54,936	1,648,080
Rice,.....	3,400,582	1,590,439	3,268,603	1,479,449

## 5. SHIP BUILDING, &amp;C., IN NEW YORK.

**SHIP BUILDING DURING THE YEAR 1849.**—Below we give a statement of the vessels launched from the various yards in this city and vicinity during the past year, with their names, aggregate tonnage, &c.; also, the class of vessels now on the stocks, &c. Taking into consideration the unhealthy season through which we have passed, it will be seen a very fair amount of business has been done at the various yards.

Mr. Thomas Collyer has launched three steamboats, viz.: The Anglo-American, Stillman Wilt, and Joseph Belknap. He has one steamboat on the stocks ready for launching, with her boilers and machinery in; her model is unexceptionable, and if one can judge from her appearance on the stocks, she will be, when launched, one of the fastest, if not the fastest, boat of her class afloat. Mr. C. is also building a steamboat intended for navigating the river Potomac, between Washington and the various ports on the river.

Mr. George Collyer has launched two steamboats, one called the Norwalk, and one of 1,500 tons, which has not, as yet, received a name. The latter is now at the Phenix Foundry, receiving her machinery, and will be ready, during the ensuing summer, to take her place on the Hudson river, between this city and Albany; and we do not hesitate to re-assert, as we have before predicted, that she will be the fastest boat afloat. Mr. Collyer is removing his yard a few rods further to the northward: consequently he has no vessel on the stocks.

Mr. William Collyer, corner of Twelfth street and avenue C, having been indisposed nearly the whole of the past year, has not built any vessel. He has now on the stocks in his yard two steamboats, one of which is 180 feet in length and the other 100, both of which, in model and workmanship, will reflect credit on him as a steamboat builder.

Mr. William H. Brown has launched the mammoth steamship Atlantic, of 3,000 tons, for Mr. E. K. Collins's line of Liverpool steamers, and the steamboat Cayuga, of about 350 tons. He has on the stocks another steamship of 3,000 tons, the Arctic, which will equal the Atlantic in every respect, also for Mr. Collins's line, and two steamboats of 500 tons each.

Messrs. Westervelt and Mackay have launched the steamship Goldhunter, of 700 tons, now on her way to San Francisco; the ship Constellation, of 2,000 tons, now running in a Liverpool line; the Jacob A. Westervelt, now on her first voyage to Liverpool; the Southampton, in the London line of packets; and the bark Powhattan, all of which are first class vessels. They have now on the stocks three ships, two of which will be completed in a short time, the aggregate tonnage of which is 3,250.

Mr. William H. Webb has launched six ships, one steamtug and one schooner, as follows: Ship Albert Gallatin, of 2,000 tons; Manhattan, of 1,800 tons; Guy Mannering, of 2,000 tons; Gallia, of 1,650 tons; Catharine, of 700 tons; and James Drake, of 640 tons; steamtug, Goliah, of 411 tons; and schooner, Samuel M. Fox, of 270 tons, which is now on her way to San Francisco. They have on the stocks two ships, of about 1,200 tons each, and one steamship, which is to run between this port and Savannah.

Messrs. Smith and Dimon have launched one clipper ship of 600 tons, which is now nearly ready for sea. She has not yet received a name, but belongs to a company at St. Petersburg. They have on the stocks two ships—one of 1,200 tons, intended for the Liverpool trade; and the other of 700 tons.

Mr. Jacob Bell has launched one steamship—the Pacific, of 3,000 tons and upwards, for Messrs. E. K. Collins's Liverpool line of steamships; and the clipper



ship *Oriental*, of about 1,200 tons, now on her way to the East Indies. He has now on the stocks the steamship *Antarctic*, of 3,000 tons, also for the Liverpool line of packets; and one ship of 1,100 tons burthen.

Messrs. Lawrence and Sneed have launched two steamboats—the *Canonicus*, of 400 tons, now at Fall river, and the *Tabaga*, of 306 tons, probably at Havanna before this time. They are building a steamboat of 250 feet in length, to run between New Orleans and Mobile, of a very fine model, the frame of which is braced together by iron bars, crossing each other diagonally, which will give her great strength.

Messrs. Perrine, Patterson and Stack, at Williamsburg, have launched two ships, one bark and six ferry boats. The ships were the *Ticonderoga* and *Philadelphia*, and bark *Jasper*. The *Philadelphia* has just returned from her first voyage to Liverpool. They have one fine ship on the stocks, of 1,185 tons, which is ready for launching.

Messrs. Jabez Williams & Sons have launched the ship *Washington*, the largest merchantman afloat, now ready to sail on her first voyage to Liverpool; and the bark *Green Point*, a beautiful vessel, now on her way to California. They have a pilot boat of 90 tons now on the stocks.

RECAPITULATION.						
	<i>Steam-ships.</i>	<i>Steam-boats.</i>	<i>Ships.</i>	<i>Barks.</i>	<i>Scho'rs.</i>	<i>Ferry boats.</i>
Launched,.....	3	9	11	3	1	6
On stocks,.....	3	7	9	...	1	...
Total, .....	6	16	23	3	2	6

In addition to the above, Messrs. Barclay & Townsend, at Hoboken, have launched one ship, and a schooner of 575 tons; and Messrs. Cafes & Allison, also at Hoboken, have launched one schooner, one steamboat, and a barge, the aggregate tonnage of which is 770.

The aggregate tonnage launched during the year, is 31,955, and what is now on the stocks amounts to about 20,230 tons.

#### MORTALITY.

Total deaths 1849, 22,372, being 7,754 more than in 1848. The deaths by cholera reached 5,072, and are included. About one-half the deaths were under ten years of age. Of the deaths, 13,300 were citizens of the United States, 5,968 Irish, &c.

## AGRICULTURAL DEPARTMENT.

### 1. SUGAR MAKING BY THE NEW PROCESS OF MELSENS.

We learn from the Franklin (La.) Bannér, that Messrs. Lyman and Todd, of that parish, have adopted Melsens's process in sugar making, and met with decided success. The sugar, according to the Bannér, is a splendid article, and the contrast between it and sugar made by the old process, is represented as quite wonderful. The sugar yielded but a very small amount of molasses, and what it did yield was uncommonly thick. The process by which this result has been obtained, is as follows:

A small quantity of the bisulphite of lime was mixed with water, and the mixture placed in a tin vessel, over one end of the mill-bed, in such a position that a small stream, issuing from the vessel, would mingle with the cane juice, as it passed from under the cylinders to the spout leading to the cistern. By this means, the fresh juice, as soon as it left the cans, mingled at once with the liquid, and such is the character of the bisulphite of lime, that it at once neutralizes every tendency to acidity that previously existed in the juice. Professor Melsens is of the opinion, that, the moment the juice leaves the cells of the cane, it commences changing into an acid, and that, if the bisulphite of lime is at once mixed with it, this tendency, so injurious to crystallization, is at once destroyed.

We learn that, in Florida, Mr. Palmer procured the hyposulphite of lime from New York, and experimented on the plantation of Albert G. Phillips. The juice of some fifty cane, four gallons in quantity, yielded fifteen pounds sugar, about double the usual amount. It is of excellent quality. No odor of sulphur was retained by the sugar. Mr. Palmer was informed, by New York chemists, that the ingredient could be manufactured at trifling expense.

A gentleman in Texas, Wm. F. Wilkins, writes us in regard to the process of Melsens:

"I find no person who understands the process properly, and I see no accounts giving a correct explanation—inasmuch as some say it is whitening, others chalk, many sulphate of lime, bisulphate of lime, hyposulphate, &c., whereas, the chemical compound is the *bisulphite* of lime. All sulphates are salts, manufactured from a base and sulphuric acid. Thus, sulphate of lime is one proportion of sulphuric acid combined with the lime; its other names are, plaster of paris, gypsum, and sometimes alabaster. When two proportions of acid are used, it is then a bisulphate. But a sulphite has, for one of its component parts, sulphurous acid, and a bisulphite two proportions. To render this more easy of general and easy comprehension, it is well to remark, that all salts, formed when the acid base ends in *ic*, will end in *ate*; but should the acid base end in *ous*, then, according to chemical nomenclature, it will terminate with *ite*.

"It is a well known fact, that, for the prevention of wines, cider, molasses, &c., souring or fermenting, cider and wine-makers, as well as planters, have, for years, been in the habit of burning in their vats, cisterns, barrels, &c., a small portion of sulphur, in the form of a few brimstone matches. Dr. Ure thus explains this: he says the fumes which are smelt so pungent when we burn a match, is sulphurous acid, which, in an empty barrel, charges it with sulphurous acid gas. This gas combines with the lime, and becomes a *sulphite* of lime, and perfectly prevents souring or fermentation, sufficiently long for any sea voyage. Dr. Ure's words are as near these as I can recollect:

"The manufacture and use of the *bisulphite* of lime, according to M. Melsens's process, is simple, and, I doubt not, effective, especially in the manufacture of second products. Since water alone has a wonderful affinity for sulphurous acid gas, it will be well to charge the receiving vessel with strong milk of lime, say 12° Baume. Into this receiver insert a tube, near the bottom, connected to a retort, or other convenient luted heater; when the retort is heated to 500° F., the gas will now be rapidly formed, and, passing into the milk of lime, you will soon have the required sulphite, which may be diluted and used with splendid results. By the aid of a simple, mechanically arranged dripping g-box, worked by a small rod, attached to the mill, the quantity required could thus be regulated to a nicety, suspended over the top roller of the mill."

## 2. SUCCESSFUL SUGAR PLANTING IN FLORIDA.

We learn, from a responsible source, the following particulars respecting the success of the past year's planting by Maj. Starke, at Spring Garden in Orange county:

Maj. Starke, we believe, has planted but three or four years, and has been able to give but little of his personal supervision to his crop. With fifteen hands he has made, at Spring Garden, sixty-five hhds. of very superior sugar, between three and four thousand gallons of molasses, one hundred bushels rice, tobacco to the amount of fifteen hundred dollars in value, besides an ample provision crop.

Twelve acres of newly-cleared land produced thirty hhds. of sugar, being two and a half hhds. to the acre; and, still more remarkable, from twelve stalks of cane there were six and a half gallons of juice expressed, which stood, by the saccharometer, at eleven and a half.

With these remarkable results before us, we may indeed say, that east Florida is a sugar country. The crops of Sadler, Marshall, Starke, &c., have settled the question as to the immense profit to be derived from the culture of the cane, and now that the Indians are being rapidly removed, and all danger from that source is at end, we look forward, with the brightest anticipations, to the future prosperity of our State.

We shall be glad to obtain further statistics of the agricultural operations of our planters. It is results that are desired to demonstrate practically what our lands are capable of producing—*St. Augustine Ancient City*.

## 3. IMPROVEMENT IN SUGAR MAKING.

A correspondent of the San Augustine Ancient City has the following in relation to an alleged improvement in sugar making :

"I will mention one improvement (not discovery) I have made in cooling and dripping my sugar, which I cannot too highly recommend to sugar planters generally. It is the plan of Dutrane, a French planter in St. Domingo, before the insurrection. I caused a number of his coolers to be made, and, upon experiment, I found them to be every thing I could desire. With these coolers I cure and drip my sugar completely in from eight to ten days. The sugar is then sufficiently dry to pack with a pounder, either in hogsheads or boxes, for the market. The sugar cured by this process has a rich, bright, bold grain, free from molasses or mother liquor, and will never drip a particle on any voyage it may be subject to. The rationale of the matter is, that nature is not disturbed in her operations, from the commencement of granulation, until the process of forming, cooling and dripping, is completed.

"You are at liberty to use this information if you desire it. The plan of the cooler can be found in almost any good work on sugar manufacturing; but it will give me pleasure to describe the particular thing at any time. I think, further, that the quantity of molasses is much diminished by this process."

## 4. SCHUTZENBACH'S SYSTEM OF CURING SUGAR.

The following letter is from an intelligent gentleman in London :

"In accordance with your kind desire, that I should give you a statement in writing of Schutzenbach's system of curing sugar, which has been so successfully adopted by the beet-root sugar manufacturers of Germany, Austria and France, in order that you may bring it under the consideration of West India planters, I beg to offer the following observations :

"Mr. Schutzenbach's process commences with the curing of concentrated sirup, and depends on the superior affinity which water has for uncrystallizable sirup, or molasses, to that which it has for the crystallizable particles of sugar, and on the economical mode of applying this principle by allowing the sugar in peculiar cases to drain, then by covering or washing the sugars first with a solution of molasses, and sugar rather cleaner than the sugar under treatment; secondly, by treating the same sugar with still purer sirup; and thirdly, by treating it with pure sugar and water. Thus, the sirup running from the cases of finished sugar, or those treated with the pure solution, contains a certain portion of molasses, which has replaced some crystals of sugar left behind with the sugar purified, and is the liquor used for the second washing of new or raw sugar. It performs its duty in the same manner as before, leaving crystals in exchange for still dirtier molasses, and, running off, is again used for performing the first washing of the sugar under treatment; and having again parted with crystals, and associated itself with dirtier molasses, it runs into the same cistern, which receives the first runnings of the cases, containing newly concentrated and granulated sirup, and is either boiled up again and purified by the same process, or sold as molasses of a very good quality. If boiled and cleared, the resulting residue may be treated again in the same manner or be converted into rum in the usual way.

"The success of this plan depends on the exposure of the sugar in cases of about eighteen inches square, and eight inches deep, having a peculiar filtering surface so made of iron wire that the sugar-crystals cannot pass through it, while it affords a perfectly free egress to the molasses. These cases hold one cwt. each, and cost about twenty to twenty four shillings complete; when in use they are placed one over the other in ranges of four to six deep, and may rest on moveable trucks for facility of operating.

"The saving of time and labor in curing sugar on this methodical plan is very great; and as the draining, first, second and third washings are effected in 8 hours each, the whole operation of draining and washing is completed in thirty-two hours after filling into the cases, which takes place the day after the sugar is first made, the night being employed in allowing the concentrated sirup to cool and granulate in large iron or wood vessels before filling into the draining cases; thus, on Monday, the cane juice would be cooked, concentrated, and set to cool and granulate; on Tuesday the mass would be placed in the cases, and on

Wednesday evening, cleaned sugar would be dry and ready for packing in the hogsheads for shipment; and the crystals are so firm and free from moisture that no waste can occur on the voyage.

"Three washings, as described, furnish beautifully white crystals of sugar similar to crushed lumps; and if double-refined loaves are required, these crystals of sugar are melted with water, passed through charcoal filters, concentrated by vacuum pans, and filled into loaves in the usual way.

"In France where double-refined loaf sugar is made direct from the beet-root juice, six per cent. of double-refined sugar is obtained on Schutzenbach's system, where five per cent. of muscovado only can be obtained by the most approved apparatus of charcoal filters, vacuum pans, etc., without his process; and this is occasioned by the complete separation of all crystallizable sugar from the molasses. No intermediate qualities of second loaves and bastards are produced; the result being only double-refined sugar and molasses totally exhausted. Moreover, every day's produce is similar, instead of varying as by the old process of refining; and no bastard molds (which occupy a large space for several weeks) are required.

"Each case contains one cwt. of sugar and is occupied with that quantity for only three days; thus, three tons of sugar made daily will require the planter to be provided with  $3 \times 20 \times 6 = 360$  cases, say 400 to allow of repairs; and the space required to contain them will be a curing house 25 feet broad and 35 feet long; the second curing house for re-boiled sirups will contain about one-third the above number of cases and be one-third the area.

"In refining colonial sugars by the most improved vacuum process, the largest yield claimed is 73.21 per cent. loaves, 9.821 bastards, 14.25 treacle and 2.68 waste = 100. By Schutzenbach's process added to the refinery, 86 per cent. finest loaves, 11 per cent. molasses and 3 per cent. dirt = 100 is produced. The cost for labor is reduced, and the animal charcoal required is about two-thirds of that now employed.

"I have endeavored to state the leading features of the plan in as few words and as simple a manner as possible, and shall be glad of the opportunity to go fully into the matter with any parties desirous of investigating it, and to furnish estimates and plans for all things necessary. I can also offer facilities of teaching the *modus operandi* in the manufactories and refineries of France, to the nominees of such parties as enter into arrangements for availing themselves of the benefits offered. I remain yours, very truly, JOSEPH WOODS."

##### 5. S. CAROLINA MECHANICS' AND AGRICULTURAL INSTITUTE.

We published in our February number the results of the first fair of this valuable institute. We have since received the address delivered by Gov. Hammond, a paper of the greatest ability, and shall endeavor in our next to present a large part of it to our readers. It will be seen by the following that the institute holds another fair in November next, and we call upon our planters and manufacturers to notice its circular:

"The institute, at its annual fair, to be held in this city on the third Tuesday in November next, will award PREMIUMS (in addition to specimens of mechanism and the arts) for the following articles:

For the best bale of sea-island cotton, not less than 300 lbs.	For the best leaf tobacco, not less than 100 lbs.
For the best bale of short-staple cotton, not less than 300 lbs.	For the best barrel of wheat flour.
For the best tierce of rice.	For the best tierce of Indian corn.
For the best hoghead of Muscovado sugar.	For the best barrel of spirits of turpentine.
	For the best barrel of resin.

"It is the intention of the institute, with the consent of the persons sending the above articles, to forward such as receive premiums to the 'World's Fair,' to be held in the city of London, in the early part of the year 1851. It is likewise intended to select, from the specimens of 'art and design' which may be presented, such as may be deemed worthy of especial distinction, to be forwarded, for competition to this great 'industrial exhibition.'

"The Committee on Premiums, therefore, earnestly appeal to all the productive interests of our country, to aid the institute in thus advancing our home enterprises, and give them reputation and character abroad.

"G. N. REYNOLDS, JR.,  
 "C. D. CARR,  
 "WM. LEBBY, } Committee on Premiums."



## 6. THE CULTURE OF INDIGO.

The indigo plant, in common with the sugar cane, cotton and tobacco plants, is indigenous to America; yet, while the latter three products have become important staples in the commerce of our country, the former has ceased to attract the attention of our planters, and is now entirely unknown among the productions of the South. An exchange states, that, in the year 1748, South Carolina exported to Great Britain 200,000 pounds of indigo, and that, in 1787, it had become one of the staples of that State. At the present time, the trade of Great Britain in indigo is of considerable importance. She imports it principally from Bengal and the neighboring provinces, and, retaining whatever quantity is needful for home consumption, exports the balance. During the six months ending the 5th of July, 1848, her imports in this product amounted to 20,535 cwt., and for the same period, ending 1849, to 30,249 cwt. The home consumption averages about 3,000,000 lbs. a year. France consumes about the same quantity. The United States use it to a large extent, but the average yearly demand we are unable to give, not having the necessary statistics in our possession.

An article of so much consequence and so extensively used as this appears to be, and, at the same time, derived from a plant indigenous to our own soil, deserves some notice, and the more especially, seeing that its production here has entirely ceased. Why is it that our planters cannot find it profitable to cultivate the indigo plant in the South? It is said that the cheap labor of India has driven them from the market. But cannot the planter compete with the labor of India in the production of indigo as well as in sugar, cotton and tobacco? We are not sufficiently well acquainted with all the facts relative to the cost of producing this article in the Southern States, nor the quality of the same, but it seems to us, that, if, in these respects we are on the same footing with those countries which produce it so largely now, we might not only raise enough for our own use, but as an article of export also. In producing sugar, cotton and tobacco, we are eminently successful—why not, then, succeed in the production of indigo? As our manufactures increase, our demand for this article will also become augmented. It appears that, in some respects, the manufacture of indigo is more feasible than the manufacture of sugar. Mr. McCulloch states, that the fixed capital required in its manufacture “consists of a few vats of common masonry for steeping the plant and precipitating the coloring matter, a boiling and drying house, and a dwelling house for the planter. These, for a factory of ten pairs of vats, capable of producing, at an average, 12,500 lbs. of indigo, worth, on the spot, £2,500, will not cost (in India) above £1,500 sterling. The buildings and machinery necessary to produce an equal value in sugar and rum would probably cost about £4,000.” He further adds, that this is the reason why the British planters in India have never engaged in the manufacture of sugar. If such are the causes alone that have induced the British planter to resort to the production of indigo, would it not be well for the Southern planter to test the matter thoroughly, and ascertain whether or not we may become extensive and successful producers of the same. It may be, that there are serious obstacles in the way of its production, of which we have not made mention.

## MISCELLANEOUS.

## 1. LOUISIANA GEOLOGY AND HYDROGRAPHY.

PROFESSOR FORSHAY, who was one of the gentlemen employed, several years ago, to make a geological exploration of this State, which was never published, but lost in manuscript, has lately been lecturing in New Orleans upon the general subject. We give the substance of one of these lectures, as reported by Mr. Frost, in the Crescent.

The State presents but a limited geological field. It is divided into the leading grand divisions of tertiary, diluvial and alluvial. The tertiary beds occupy two-fifths of the State, as is shown upon a chart delineated by Prof. Forshay.

“The tertiary lies north of a waving line, commencing on the Sabine, near the mouth of the Neches, crossing Red river twenty miles north of Alexandria, and the Ouachita, ten miles north

of Harrisonburg. Its beds contain coal (aluminous brown coal), salt, iron, ocher, gypsum and marls. The coal was inferior to Pittsburgh coal, and would not compete with it in market, but was worth developing for use, in those portions of the State, where the better coals would not bear the expense of transportation. It abounded in Sabine, Natchitoches, Caddo and DeSoto, and all the parishes thence east to the Ouachita river. Salt springs were common in Natchitoches and Rapides, and had been wrought in earlier times. A saline bed seemed to underlie the tertiary bed generally. Iron was found in great quantities in most of the tertiary parishes, and is well worth the attention of those who would develop the State resources. Ocher, gypsum and marls, too, were found—the first in the native form, and the others coextensive with the tertiary beds. The gypsum was very fine—equal to any known to commerce; and the marls very rich, in the regions where they will be most needed.

"The diluvial beds contain little of economical interest, except the sand-stone, which abounds at its northern margin. These are variously hard—from a crumbling softness to a flinty quartz hardness. The whole line of the southern tertiary and northern drift (or diluvial beds) presents hills and cliffs of these rocks, most of the quarries furnishing a very good building-stone, of a cream-white color. The harder varieties would answer well for block pavements.

"The alluvial beds occupied about two-fifths of the State, the delta of the river being about thirty-five miles wide, from about Vicksburg to Bayou Sara, but above and below those points, much wider. Toward the mouth it widened out, and occupied the whole southern front on the Gulf coast. This alluvion was the gold mine of Louisiana. It was rescued from the waters by the industry of man.

"The lecturer then examined the Mississippi river, which, he said, he had measured at various points, from the Balize to Galena, and found it quite as wide 1,700 miles up, as at the mouth. Then the addition of four large, and many small rivers, did not widen it, nor render it more rapid—but they deepened it. The effect of concentrating its waters, was to deepen its channel. Bear this in mind. The books tell us that rivers widen by a certain rule—by increase of entering rivers. The Mississippi river, probably, was not duly advised of these formulas, for it had rules of its own. The lecturer had much respect for books, but much greater respect for truth.

"We were trying to control the river, and keep the tyrant within bounds. He once usurped the whole alluvion, and yearly kept it under water. Our barriers were mere child's play as yet. We must build greater ones, not higher, but stronger and further back—and give room to the steamboat waves, and the abrading power of increased currents, produced by leveeing.

"The river did not rise higher now than before levees were used. This he proved *a priori*, and then illustrated by history and observation; but the most powerful proof adduced was, that there were many alluvial banks higher than our present highest waters, and the levees do not differ in average height for 500 miles up the river. Of course, the river was once high enough to deposit the highest alluvial grounds. Therefore, levees, by confining the water, enabled the river to keep open its own channel. Nothing else kept open such a channel, 100 feet deep ten miles above the S. W. Pass, but the abrasive force, and nothing else could keep the bars as they are, fifteen to eighteen feet. Divide the river by outlets, and you divide the channel-making power—you weaken the attack upon the bars at the mouth, and destroy the river's navigability. The river belonged to the commerce of the valley, not to Louisiana. Have a care what experiments you try—for, once divided, you never could restore it to its channel."

## 2. PROPOSAL TO RE-LEVEE THE STATE OF LOUISIANA.

At the late session of the legislature, Gen. Duff Green made a proposition to the State, which, being referred to the joint committee on Levees, was ordered to be printed, and now appears among the documents of that committee. Mr. DeBow, acting under instructions from Gen. Green, stated that some modifications in regard to the extent of the contract, size of the levees, advance payments, &c., might be agreed to by him.

The leveeing is proposed to be done by a machine of novel construction and great power, operating at about half the cost incurred under the present levee system, and the proprietor is most sanguine of success. Being, at this time, an extensive contractor in works of internal improvements, and especially upon the Georgia and east Tennessee railroad, Gen. Green's claim to practical and scientific knowledge, energy, ability and enterprise, cannot be questioned.

The following is the letter of Gen. Green:

"NEW ORLEANS, February 6th, 1850.

"DEAR SIR—I wish to contract with the State for making an embankment on both sides of the Mississippi, from the State line to the Gulf. Much of the work would be done with a machine, the power of which is equal to the steam used, and the number of machines can be so increased as to expedite the work as fast as may be required.

"The embankment should not be less than three feet above the highest tide heretofore known; it should not be less than sixty feet wide on the surface; it should have five feet slope for each foot of elevation.

"Thus, if the embankment be three feet high, it should be ninety feet on the base, with sixty feet on the top—certainly not less than seventy-five feet base for sixty feet surface.

"I will contract for the whole, commencing on the upper part of the work, at the rate of ten cents per cubic yard of embankment, and receive payment, one half in cash, and the other half in lands of the State, to be selected by me from the lands given by Congress to the State, at the government price, say one dollar and twenty-five cents per acre.

"After a reasonable time to prepare the machinery, I will progress with the work as fast as the cash payments are made; that is, if the payments are made in five years the work shall be done in five years—the payments to be made monthly, on estimates to be approved by the State engineer.

"An advance of two hundred thousand dollars, to be expended in the purchase of slaves and machinery, which shall be mortgaged to the State, and deducted from the monthly cash payments, at the rate of twenty-five per cent. on these payments, until the whole is paid.

"The cash payments may be divided equally between the State and the front proprietors, crediting the front proprietors with the embankments heretofore made, which, when used, are to be allowed for and deducted.

"This would levy a tax of two and a half cents per cubic yard on the front proprietors, and two and a half cents per cubic yard on the State; the rest to be paid in lands given to the State, except that, in case of deductions for embankments now made, the State must make up the cash payment, so that one-half of the work done, or five cents per cubic yard on the embankment made by me, shall be paid in money.

"I will also levee or widen any of the outlets from the main river on the same terms, and can, at very short notice, place any requisite number of machines on the work.

"The legislature should pass an act to protect the embankment thus made, and also to protect any railway, or apparatus, or machinery of any and all kinds, used in making said embankment.

"The law should authorize the contractor to take any lands, timber or materials, necessary and proper to be used for making the embankment, for which the State should pay all damage, if any.

"This arrangement will reclaim all, or the greater part, of the land north and east of the river, and much of that south and west of it, and will leave a very large part of the submerged lands to be applied to other means of reclamation, such as embankments from the river to the lakes, and across the plantations, and to ditches and canals, all of which may become parts of a general system.

"The first improvement is an embankment protecting the front lands—the others follow.

"Yours truly,

DUFF GREEN."

### 3. NEW ORLEANS IMPROVEMENTS, ETC.

#### PROGRESS OF THE SECOND MUNICIPALITY.

Recorder Baldwin made the following report to the council of the buildings erected in this municipality, the past year, and their estimated value:

Wards.	Brick Buildings		Wooden	Value.	DESTROYED BY FIRE.	
	and Improv'ts.	ditto.			I Ward.....	II Ward.....
I.....	13	34-47	\$132,000		6,000	5,700
II.....	5	41-46	141,100		20,300	14,000
III.....	12	13-25	76,700		26,500—	74,000
IV.....	8	24-32	91,000			
V.....	23	00-23	220,000			
VI.....	40	00-40	171,800			
VII.....	17	62-79	112,000			
Total.....			\$944,000			

[We are indebted for the following to the columns of the New Orleans Picayune and Delta.—Ed.]

#### NEW ORLEANS MANUFACTURES.

On this subject our citizens are becoming awakened as from a lethargy. The spirit is abroad, which demands the development of southern artistic skill, nor can many years pass away till that demand is satisfied. Even now, a number of embryo establishments are beginning to show the outline of their promise; and some are so far advanced as to be able successfully to compete with the older establishments of the North. In the lower part of the third municipality, P. R. Barnes & Co. have a soap and candle manufactory, from which, during the course of the last year, large shipments have been made to New York and Boston, at prices which have yielded handsome returns to the northern purchasers. We have examined Mr. Barnes's establishment, and can speak from our own knowledge of its extent and excellence. This manufactory can now furnish one thousand boxes of soap, and one hundred and fifty boxes of candles per week, of the best quality; and the soap is sold at least one cent per pound lower than that of any other establishment in the country. Here is an instance of successful competition with the North, which can be proved by balance sheets and accounts of sales. Mr. Barnes's candles are called "Barnes & Co.'s Adamantine Candles," and seem equal to sperm, in beauty and durability.

#### CITY MANUFACTORIES.

As we stated some time back in our article on city manufactories, there are many branches of industry that have within a few years sprung up in our city and are now in operation on a large basis, of the existence of which few even of our oldest and best informed citizens and business men are aware. Any information on such subjects cannot fail to prove interesting to those who take the least interest in the welfare of this great empire. It has long been the peculiar distinction of New Orleans, that she depended for most of the important articles of her home consumption on the North and West; thus existing as a city only so far as she was a great depot for the receipt and transmission of the principal commercial staples of the country. Such a distinction *per se* is by no means an enviable one, and every effort to discard it should be viewed in the most favorable and encouraging light. Possessing, as we do, a heterogeneous population, bringing together the mechanical arts and skill of all civilized countries, with an immense home demand for the products of their labor and the greatest abundance of material to exercise its powers, we are confident that the impetus once given to city manufactures will result in a steady increase of their prosperity, and will, it is probable, before long, claim for them a very important position in our statistical history and the sources of our wealth.

Very important articles of domestic consumption in all cities are those necessities of civilized life, soap and candles. For years our cotemporaries in the North have furnished to us these supplies at a very high price, and consequently on the immense amount sold here they have received enormous profits. We are now, however, relieved of this heavy drain on our pockets to the benefit of northern capitalists. Within a couple of years, in addition to six or seven small man-

ufactories of the articles mentioned that had existed for some time in Lafayette, three or four large establishments have been put in operation in the rear of third, and one has sprung into existence in the second, municipality. The effect has been to drive the northern manufacturers out of the city market, though they still retain a hold on the interior. The establishments we have mentioned supply our citizens with a better article and at a more reasonable price. The quality of soap is the yellow bar, and of candles the tallow; though one of the manufactories—that of Messrs. Barnes & Co., in the third municipality—makes the stearin or star candle in large quantities. This establishment is the most extensive in the city in both soap and candle making, and annually employs a capital of \$40,000 in its operations. The house of Converse & Co., at the corner of Lafayette and Tchoupitoulas streets, second municipality, is also extensively engaged in this business. There are two large manufactories in the third municipality expressly for tallow candles. A great portion of the fat and grease used in this business is obtained from the hotels, steamboats, ships and private residences of the city. There are in all about fourteen establishments in operation, employing each from five to twenty-five workmen, all Germans; and the quantity, say of yellow soap, made in a week, may in some degree be realized from the fact of one factory—that of Mr. Joseph Leterer—employing from ten to twelve hands, turning out an average of fifteen thousand pounds in the time specified. The demand on all these factories for the products of their vats, presses and molds, is continually on the increase, and we have no doubt that the interior of the State, the towns on the western rivers, and those connected with us through the Gulf trade, will gradually be induced to look to our city establishments for their supplies of these indispensable articles; and we shall finally, it is to be hoped, become masters of this branch of trade throughout the South and West.

#### LEEDS' FOUNDRY, NEW ORLEANS.

A person who would desire a correct conception of the vast improvements which have recently been made in the science of mechanics, of the wonderful labor-saving machines which American mechanical genius has called into existence, and of the perfection which the manufacture of machinery has attained at this, the south-west point of the Union, should visit Messrs. Leeds & Co.'s foundry in Delord street. This establishment is of many years standing in this city; indeed, it was the pioneer in its line of business in this section of the country, and, without seeking for "protection," it has gone on from year to year, growing with the growth of the city, and extending as its business extended, in the face of strong northern and southern opposition, till now, when its character for constructing the best machinery is so well established, that it has nothing to fear from competition, whether it come from the North or the West.

It employs, on an average, two hundred men daily, and it is astonishing the work they do, owing to the operation of labor-saving machines, and the hundred ways in which mechanic power is made to substitute manual labor, and, moreover, to do that which it would be impossible for mere manual labor to accomplish. One steam-engine sets the whole machinery of the establishment in operation. Here it kindles some half dozen blast furnaces; there it sets a ponderous trip-hammer to forge out an immense shaft of iron. At this place it puts a shears clipping sheet-iron half an inch thick, which it does with as much facility as a tailor would cut his cabbage; and, at that, it sets a punch in motion, that punches a hole through an iron bar, or several of them, in a minute, just as easily as a knife would run through butter. By the power of machinery, they take a shaving, half an inch thick, off a metal casting; by the power of machinery, in fact, they perform what, to the uninitiated, would appear mechanical miracles.

We are sorry that the want of a practical knowledge of the business, and of sufficient leisure, does not permit us to give this establishment a more extended notice.

#### NEW ORLEANS CHARITY HOSPITAL.

This institution being one of the most extensive ones in the world, the following statistical table of the cost of maintaining it for twenty years, with interesting incidents connected with the inmates for that long period, State appropriations for its relief, &c., will be examined with interest by all who are fond of research:

	Cost main- tenance.	Am't rece'd fr'm pas'grs.	Patients admit'd.	Foreign- ers.	United States.	Unk'n	La.	State ap- propriations.
First January, 1830								
to 31st Dec., 1841			54,790	37,543	16,247		512	
Do. do. 1842	\$34,651 96	\$ 5,117 31	4,404	3,277	954		34	
Do. do. 1843	34,746 33	14,819 49	5,013	3,937	1,076		59	
Do. do. 1844	39,231 04	16,668 79	6,128	4,530	1,316	282	113	\$15,000
Do. do. 1845	39,310 43	23,785 25	6,136	4,704	1,350	82	119	15,000
Do. do. 1846	45,088 39	30,146 94	8,044	6,151	1,773	121	145	10,000
Do. do. 1847	56,291 08	40,402 53	11,890	10,171	1,562	157	63	20,000
Do. do. 1848	*68,018 54	41,817 41	11,954	10,280	1,579	86	111	10,000
Do. do. 1849	66,351 32	53,412 46	15,558	13,634	1,782	142	147	10,000
	\$381,719 09	\$226,170 18	123,917	94,227	27,639	870	1,293	\$80,000

\* Of this amount \$11,251 were paid to the Franklin Infirmary, for patients removed to said institution with typhoid or ship fever.

Main building 33 wards—536 bedsteads. New wing, or female department, 4 wards and 8 private rooms—150 bedsteads. Texas—35 bedsteads. New cells—32 bedsteads.

In the year 1832 the number of admissions to the hospital was 2,480, and the cost of maintenance was \$31,294 70. The committee on the part of the Senate and House, in their report, use the following language: "Your committee need only state the number of patients received the last year, from almost every State, nation and kingdom on earth, to exhibit in strong colors the wide extended usefulness of this unflinching monument of individual liberality and public beneficence." A brief comparison of the records of the institution in 1832 and 1849 will exhibit at a glance the increased usefulness and comparative economy that has characterized the admini-



tration of the hospital. The number of patients admitted in the latter year was 15,558, and the cost of maintenance only \$66,351 32; whereas, in 1832, the expenditure was nearly equal to one-half of the entire outlay of 1849, whilst the number of patients was not more than one-sixth compared with the admissions of 1849. This simple fact speaks volumes.

HENRY HIER, Treasurer.

#### SAILOR'S HOME IN NEW ORLEANS.

Agreeably to previous notice, a public meeting was held on Monday evening, at the lyceum of the second municipality, for the purpose of adopting measures for the erection of "a Sailor's Home" in this city, where they can be lodged and boarded, and be taken care of in sickness, without being subject to the numerous impositions, frauds and suffering, which now so constantly attend them when on shore.

The meeting was organized by the appointment of the collector of the port, Samuel J. Peters, as president, with L. Matthews, Hon. Charles Watts, P. Conrey, jr., B. Whelehan, Nathan Jarvis and Joseph Harrod, as vice-presidents, and F. Camerden and W. J. Dewey, as secretaries.

The meeting was addressed in a very eloquent and able manner, by Messrs. J. P. Benjamin, M. M. Cohen and J. W. Crockett, and also by W. Mure, esq., the British consul, on the necessity of a sailor's home, and the high importance and usefulness of the contemplated measure.

Mr. J. J. Day offered the following preamble and resolutions, which were unanimously adopted: Whereas, seamen compose a large and eminently useful class of our fellow-men—through whom we carry on our social and commercial intercourse with all parts of the world, and to whom our own city is largely indebted for its commercial prosperity and greatness;

Whereas, the physical and moral condition of this class has, for several years past, engaged the earnest and efficient consideration of the most prosperous communities of the world;

Whereas, New Orleans can in all respects compete with other seaports on terms of the highest and most creditable character—and though hitherto she has abandoned the careless, confiding, open-hearted sailors, who come to us, to the extortion and rapacity of unprincipled men, she is now desirous to prevent it; and

Whereas, from thirty to forty thousand sailors annually come to this port, who alone of all classes seem to have been neglected—

Resolved, that we acknowledge our indebtedness to seamen, as the instruments of our social and commercial intercourse with the world and for their important services in the establishment and maintenance of our national position and prosperity.

Resolved, that we sincerely and deeply sympathize with sailors in their privations, perils and sufferings—and acknowledge with deep regret, the injury and neglect, with which their important services have been too commonly rewarded.

Resolved, that we deem it to be not only our duty, but also as conducive to the best interest of this city, to co-operate in any judicious plans which may be devised to promote their moral and physical good.

Resolved, that we recognize the special claims of seamen upon this community—and in return for their useful and important services, we pledge ourselves to erect in New Orleans a Sailor's Home, where they shall find a refuge from the destroyer—a pleasant retreat in health—and the tender sympathies and kind treatment of friends in sickness.

After which, the meeting adjourned.—*Bulletin.*

#### IMPROVEMENT IN THE ARTS IN NEW ORLEANS.

AN IRON PIANO—If men do not live by bread alone, neither do cities live by corn, cotton and commerce. In this material age, steam-engines stand in some danger of monopolizing mind, and resolving all of its emotions and sentiments by the laws of *mechanics*. The clink of dollars, rattling of the loaded car along the paved way, the whizzing of the locomotive, become music as exquisite as that of the spheres which threw dreamy Pythagoras into ecstasies! Therefore it is, when the title above, *iron piano*, strikes the eye, there shall not be wanting many to marvel what it can have to do with statistics and the ways of commerce.

Let them marvel. There is a philosophy above that of loom and spindle—there is a heart, as well as a hand, to humanity. If *work* be prayer, higher than all work is *rest*, wherein the soul, freed from earth's fetters, soars away, communing with soul and losing itself in the boundlessness of dream-land. Music kindles the fires whose embers had otherwise been shaken out and scattered in the jostle of "loom and spindle." In younger years, when fancy's plumes were yet unclipt, our pen dashed off as thus: "Do we dream how much we are indebted to music, when the soul feels its imperishable essence—when the bonds gail it, the crime disgusts it, the fetters break and the spirit soars, reveling amid worlds and suns and systems, on the bosom of eternity."

"Music religious hearts inspires—

It wakes the soul—it lifts it high;

It fills it with sublime desires,

And fits it to bespeak the Deity."

It was our purpose, from which we have been led away, to speak of an ingenious and exceedingly important improvement made by one of our citizens, Charles Horst, in the construction of that most indispensable luxury of modern saloons, the *piano forte*. The instrument which he has succeeded in manufacturing, is so beautiful and perfect and admirable, that a mead of praise such as this is more than deserved. Its softness, melody and power, are almost beyond compare. No better proof can be adduced than this, that E. A. Tyler, on Camp street, who is charged with sales, does not succeed in supplying orders half so fast as they come in. He alone has the right of disposing of the piano.

The instrument is, we believe, manufactured by James Grovesteen, of New York, under Mr. Horst's patent. The use of glue is but a subsidiary force in keeping the parts together—dampness affects it very little, and the cost is from twelve to fifteen per cent. less than other descriptions of piano of similar proportions, &c. The testimony of distinguished pianists, of New Orleans, is unanimously, we learn, in its favor. The following is a description of the invention:

"The improvement consists as follows: In an entire iron top frame, cast in one piece, doing

away with the iron brace to be found in other instruments, diagonally stretched across the top, and thereby lessening, in a great measure, the vibration. A cast iron frame in the shape of an L encircles also the bottom blocking and filling of the piano, which are firmly kept together by iron bolts and screws uniting the two frames. The rim or outside case is detached from the works in such a manner, that it can be taken off and replaced with but little trouble. The advantages resulting from this new mode of construction are evident. The different parts of the instrument form a solid, compact body, imparting more vibration and firmness to the tone and touch, and the top frame always finds the necessary assistance, which it has to borrow from the bottom, in order to resist the heavy strain of the strings. On the old principle, this same assistance decreases from day to day after the body of the piano loses its compactness and firmness by the never-ceasing effects exercised by the atmosphere.

"In place of decreasing in quality, it is very rational to believe that the iron piano will improve in sound by time; for the more seasoned the wood becomes, the more mellow the sound must be—the firmness and solidity remaining always the same. This piano also withstands the effects of any climate, and requires far less tuning than instruments of another kind. The movable rim or frame can, after a lapse of years, be laid aside for one of any other pattern—the works remaining unimpaired."

#### VITAL STATISTICS OF NEW ORLEANS.

In our next, we shall make an analysis of the report of the Board of Health, of this city, for the past year. It is an able and interesting document, illustrated with mortuary and meteorological charts.

"The vital statistics of New Orleans," says Dr. Barton, in his able report to the American Medical Association, "constitute a problem, and an important one, that has never been solved. We have to presume the United States census of 1830, to be correct—that of 1840, the cause of all the errors, we now know was not. A census was made in 1847—it was partially correct only—the entire population almost certainly was not given, and then there were no details of ages, &c., and, of course, no basis for calculating the average age of the living; so I have taken these for 1830 as my basis, and calculated it to be twenty-four years one month. In the census of 1847, none but strictly family residents were taken; the thousands that count New Orleans their homes, and are occasionally absent, were left out entirely." Dr. Barton, therefore, adds 5,000 to the census of 1847, making the number 100,028, and supposes 20 to 30,000 floating population, belonging to the city, and adding to its diseases and deaths. He then calculates the mortality from 1841 to 1848, at one in 19.32 of the population, an estimate of the most mournful character, if the evidence be found satisfactory. In 1845 the mortality was one in 33.07. Dr. Barton adds, "I think I am entitled to the credit of having rescued from oblivion some ten or fifteen years of the records of mortality, which had been surreptitiously made away with. I have collected now the mortality for about forty years," &c. "The actual mortality of the city is certainly very large, but then it is evident, from the ages of those who die, from their short residence here, and from their course of life, not at all adapted to the climate, that the climate, *per se*, has less to do with it than other conditions."

#### 4. EDITOR'S NOTE.

We are indebted to Gov. Hammond, of South Carolina, for a copy of the able addresses delivered by him, before the societies of Columbia College, and at the first annual fair of the South Carolina Institute. The last of these, we shall take occasion to refer to in our pages hereafter, and extract from at length. Mr. James's letters, on the culture and manufacture of cotton, in reply to A. A. Lawrence, have also been received. The South and West are greatly indebted to him for his services in this department of our industry. Dr. Dowler will receive our thanks for his interesting paper upon the Natural History of Death. It is a singular subject, but handled by the writer with great ability, and presented with an array of facts and illustrations that is striking. We shall have occasion again to refer to the labors of Dr. D.

#### TO OUR SUBSCRIBERS AND THE PUBLIC.

THE undersigned being now sole proprietor, as well as editor of the Review, has in contemplation many improvements in the character, appearance and size of the work, which, he believes, will place it on a parallel with any periodical, published in this country or abroad. He has determined to spare no pains or expense, and will proceed at once to secure the ablest writers from all parts of the country.

A LITERARY DEPARTMENT will be added to the Review, in which will appear papers upon every subject of letters, science, criticism, foreign and domestic affairs, poetry, romance, etc. This will be a new division, and not at all trench upon previous ones, which will occupy their usual space. The editor hopes that it will remove an objection, which has been frequently made to the work, that, filled with facts and figures on the gravest subjects, it possessed nothing of the light magazine character, and, therefore, could not interest the mass of readers. With this amendment, and the additional expense it will cause, it is hoped the patrons of the work will interest themselves among their friends and neighbors, in enlarging the subscription list and receipts. If every subscriber could send us a new name, our plans would be carried out with highest satisfaction to all parties.

To those indebted to the Review, and the number is still large, a gentle hint can only be needed, PAY UP. The urgent demands of the Review, whose expenses are very great, forbid delay. A remittance by mail is always agreeable, and it further saves the editor an expense of from one to two dollars, paid to collectors, and sometimes the whole amount, when they see fit to make no return at all. *The mails are perfectly safe!*

A few complete sets of the Review are now on hand, in handsomely bound volumes, and will be furnished, without any charge for binding, if orders are sent immediately. The work has been published nearly four years.

Planters, desiring to sell their estates, or to purchase new ones, would, perhaps, find it to their advantage to avail themselves of the advertising facilities of the Review, which reaches the whole planting interest. Terms for such advertisements will be most moderate. J. D. B. DeBow.